File 347:JAPIO Oct/1976-200 ec(Updated 020401)
          (c) 2002 JPO & JAPIO
File 350:Derwent WPIX 1963-2001/UD,UM &UP=200226
          (c) 2002 Thomson Derwent

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Set     Items    Description
S1        290     (SIZING OR SIZE OR SIZES)(5N)(SERVER? ? OR WEBSERVER? ? OR
                  DATABASE? ? OR DBMS OR RDBMS)
S2       2678     (REQUIR? OR NEEDS OR NECESS? OR DEMAND? ? OR CONFIGUR?)(3N-
                  )(SERVER? OR WEBSERVER? OR APPLICATION? OR PROGRAM? ? OR SOFT-
                  WARE OR DATABASE? OR DBMS OR RDBMS)(3N)(HARDWARE OR CLIENT? ?
                  OR PC? ? OR COMPUTER? ? OR WORKSTATION? ?)
S3       2259     (REQUIR? OR NEEDS OR NECESS? OR DEMAND? ? OR CONFIGUR?)(3N-
                  )(SERVER? OR WEBSERVER? OR APPLICATION? OR PROGRAM? ? OR SOFT-
                  WARE OR DATABASE? OR DBMS OR RDBMS)(3N)(TERMINAL? ? OR DEVICE?
                  ? OR EQUIPMENT OR MACHINE? ? OR OPERATING)
S4      38737     (WORKLOAD? ? OR WORK()LOAD? ? OR PROCESSING OR PERFORMANCE
                  OR CAPACITY)(5N)(REQUIR??? OR REQUIREMENT? ? OR NEEDS OR NECE-
                  SSARY OR NECESSIT???? OR DEMAND? ?)
S5      18765     (TYPE? ? OR KIND? ? OR SORT? ? OR FAMILY OR CATEGORY OR CL-
                  ASS OR BRAND? ? OR VARIET??? OR GROUP? ?)(5N)(SERVER? ? OR WE-
                  BSERVER? ? OR APPLICATION? ? OR PROGRAM? ? OR SOFTWARE? ? OR -
                  DATABASE? ? OR DBMS OR RDBMS)
S6      86897     (PROCESSOR? OR MICROPROCESSOR? OR PROCESSING()UNIT OR CPU -
                  OR MPU)(5N)(UTILIZ? OR UTILIS? OR USE? ? OR ACTIVE OR BUSY OR
                  WORKING OR OPERAT??? OR OPERATION? ? OR FUNCTION? ? OR FUNCTI-
                  ONING OR RUN???? OR ACTIVE OR ACTIVIT???)
S7       5428     (PROCESSOR? OR MICROPROCESSOR? OR PROCESSING()UNIT OR CPU -
                  OR MPU)(5N)(IDLE? ? OR IDLING OR INACTIV? OR INOPERA? OR REST?
                  OR WAIT? OR LATENC??? OR LATENT)
S8      56592     (TRANSACTION? ? OR ACTIVIT??? OR PROCESSES OR ACTION? ? OR
                  EVENT? ? OR JOB? ? OR TASK? ? OR REQUEST? ? OR QUERY OR QUERI-
                  ES)(5N)(RATE OR SPEED OR TIME OR SECOND? ? OR MINUTE? ?) OR T-
                  PS
S9         36     S1 AND (S4:S8 OR BENCHMARK? ?)
S10       308     S2:S3 AND S4
S11       551     S2:S3 AND S5:S8
S12       221     S10 AND IC=G06F
S13       169     (WORKLOAD? ? OR WORK()LOAD? ?)(5N)(REQUIR??? OR REQUIREMEN-
                  T? ? OR NEEDS OR NECESSARY OR NECESSIT???? OR DEMAND? ?)
S14         1     S2:S3 AND S13
S15     21897     (REQUIR??? OR REQUIREMENT? ? OR NEEDS OR NECESSARY OR NECE-
                  SSIT???? OR DEMAND? ?)(5N)(SERVER? ? OR WEBSERVER? ? OR APPLI-
                  CATION? ? OR PROGRAM? ? OR SOFTWARE? ? OR DATABASE? ? OR DBMS
                  OR RDBMS)
S16    114620     (REQUIR??? OR REQUIREMENT? ? OR NEEDS OR NECESSARY OR NECE-
                  SSIT???? OR DEMAND? ?)(5N)(HARDWARE OR CLIENT? ? OR PC? ? OR -
                  COMPUTER? ? OR SYSTEM? ? OR WORKSTATION? ? OR TERMINAL? ? OR -
                  DEVICE? ? OR EQUIPMENT OR MACHINE? ? OR OPERATING)
S17        32     S13 AND S15:S16
S18      2359     S4 AND S5:S8
S19        12     S13 AND S5:S8
S20         7     S19 NOT (S9 OR S17)
S21        50     S13 AND IC=G06F
S22        33     S21 NOT (S9 OR S17 OR S20)
S23        28     S5 AND S6:S7 AND S8
S24         2     AU="QUERNEMOEN J M"
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DIALOG(R)File 347:JAPIO

06537314   **Image available**
DATABASE DEVICE, DATABASE ACCESS METHOD AND RECORDING MEDIUM RECORDED WITH
DATABASE ACCESS PROGRAM

PUB. NO.:   2000-123038 [JP 2000123038 A]
PUBLISHED: April 28, 2000 (20000428)
INVENTOR(s):   SHU SHOGAN
               TOYODA SHOICHI
APPLICANT(s): MITSUBISHI MATERIALS CORP
APPL. NO.:   10-294138 [JP 98294138]
FILED: October 15, 1998 (19981015)
INTL CLASS: G06F-017/30; G06F-012/00

ABSTRACT
PROBLEM TO BE SOLVED: To provide a database device for adding or deleting a
field without changing the configuration of a database.

SOLUTION: This database device is provided with a corresponding relation
part 4a having a corresponding relation table in which the field name of a
field defined in a **database** 1, the **type** and **size** of data stored in
the field, and column number applied to the field are stored so as to be
made correspond to each other, a data storing part 4e for generating a data
record from data inputted by an input part 4b by referring to the
corresponding relation table, and a record reading and restoring part 4f
for extracting the data record matched with a retrieval condition inputted
by the input part 4b from the database 1, restoring the data inputted by
the input part 4b from the data record by referring to the corresponding
relation table and outputting the data to an output part 4c.

DIALOG(R)File 347:JAPIO

05650618   **Image available**
DATA STORAGE DEVICE

PUB. NO.:   09-265418 [JP 9265418 A]
PUBLISHED: October 07, 1997 (19971007)
INVENTOR(s):   NISHIDA YOSHIO
APPLICANT(s): OKI ELECTRIC IND CO LTD [000029] (A Japanese Company or
               Corporation), JP (Japan)
APPL. NO.:   08-075568 [JP 9675568]
FILED: March 29, 1996 (19960329)
INTL CLASS: [6] G06F-012/00
JAPIO CLASS: 45.2 (INFORMATION PROCESSING -- Memory Units)

ABSTRACT
PROBLEM TO BE SOLVED: To enlarge/reduce a database area without making a
manager to be conscious by deciding the necessity of enlarging/reducing the
size of a storage area and enlarging/reducing the storage area.

SOLUTION: In a database management system 3, by a function as an area
change means, the **size** of the **database** area 2 is enlarged/reduced.
Also, in the database management system 3, by the function as a deciding
means, the data amount of a data **group** stored in the **database** area 2
and the **size** of the **database** area 2 are compared under prescribed
conditions and whether or not dynamic area securing to the database area 2
is required is decided. In the server 1, a dynamic area securing processing
is called at every T time interval. When the dynamic area securing
processing is called, by the database management system 3 area enlargement
or area reduction to the database area 2 is automatically performed.

DIALOG(R)File 350:Derwent WPIX
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012865359   **Image available**
WPI Acc No: 2000-037192/200003
XRPX Acc No: N00-027903
   **Multidimensional computerized resource scheduling method for satellite
   communication system**
Patent Assignee: TELOGY NETWORKS INC (TELO-N)
Inventor: BERISFORD D; DIMITRIJEVIC D D
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
US 5978363   A   19991102 US 96733475   A   19961018 200003 B

Priority Applications (No Type Date): US 96733475 A 19961018
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
US 5978363   A   25 H04B-007/185

Abstract (Basic): US 5978363 A
       NOVELTY - During scheduling and unscheduling, a record that matches
    with the indivisible and range divisible resource request is searched
    from a database, and if the record is not found, the request is
    rejected. A request for scheduling and unscheduling percentage
    divisible resources is rejected, when the available level is
    inadequate.
       DETAILED DESCRIPTION - An algorithm for scheduling an indivisible
    resource causes searching of the resource database on receipt of a
    request to schedule the resource for a specific interval. If no
    available record matching the request if found, the request is
    rejected. If the available record is found it is made unavailable for
    the requested interval. A new record is created for any portion of the
    available record either prior to the interval or after the interval. An
    algorithm for scheduling use of a percentage divisible resource
    involves searching all of the database corresponding to a **time** period
    on receiving a **request** to schedule the percentage divisible resource.
    The request is rejected if the available resource level is inadequate
    in such records, otherwise, the level of each record which would be
    affected by the request is adjusted upwards for any amount requested to
    be unscheduled and downwards for any resource requested to be
    scheduled. A new record is created for any time slot prior to the **time**
     period specified by the **request** with an unchanged level of the
    available resource and then, the new record is merged with any left
    slot with the same level of resource available. Similarly another new
    record is created for any time slot following the time of the **time**
    period specified by the **request** with an unchanged level of available
    resource and the created new record is merged with any right slot with
    same level of resource available. An algorithm for scheduling the use
    of range divisible resources is also described.
       USE - As a database on a scheduling computer used especially with
    DAMA satellite communication systems.
       ADVANTAGE - Reduces **size** of **database** , since unwanted records
    are deleted. Since two slots are merged, the required amount of power
    is reduced.
       DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of
    bandwidth on demand network architecture.
       pp; 25 DwgNo 6/16
Title Terms: MULTIDIMENSIONAL; RESOURCE; SCHEDULE; METHOD; SATELLITE;
   COMMUNICATE; SYSTEM
Derwent Class: T01; W02
International Patent Class (Main): H04B-007/185
International Patent Class (Additional): H04B-007/212
File Segment: EPI

9/5/23   (Item 17 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012712063   **Image available**
WPI Acc No: 1999-518176/199943
XRPX Acc No: N99-385369
 Frequency moments estimating method for database
Patent Assignee: LUCENT TECHNOLOGIES INC (LUCE)
Inventor: ALON N; MATIAS Y; SZEGEDY M
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5950185	A	19990907	US 9617950	A	19960520	199943	B
			US 97861415	A	19970521		

Priority Applications (No Type Date): US 9617950 P 19960520; US 97861415 A
  19970521
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5950185	A		9	G06F-017/00	Provisional application US 9617950

Abstract (Basic): US 5950185 A
      NOVELTY - A subset M of the data elements of specific type that are
    received as input to the database is chosen randomly. The counters
    provided for each subset are incremented corresponding to the type of
    elements in the subset is identical with the **type** of element in the
    database . A random variable is computed for each subset of data
    elements.
      DETAILED DESCRIPTION - The random variable for each subset of data
    elements is given by f'u(ru)=(ru)k-(ru-1)k where ru is the current
    count of counter corresponding to the subset data element. The random
    variable is processed to determine the estimate of frequency moment fk.
    The random variables f'(ru) are grouped into M2 groups of M1 elements.
    An average value fv for M1 elements are calculated. Then, median value
    of fasterisk is obtained for M2 quantities of fv values. An estimate
    for Fk is computed as mfasterisk where m is the **size** of the **database**
    .   .
      USE - For database.
      ADVANTAGE - Memory requirement is relatively reduced for estimating
    frequency moment by providing counters for the chosen subset of data
    elements.
      DESCRIPTION OF DRAWING(S) - The figure shows the flow chart of
    steps involved in computing the frequency moment.
      pp; 9 DwgNo 3/3
Title Terms: FREQUENCY; MOMENT; ESTIMATE; METHOD; DATABASE
Derwent Class: T01
International Patent Class (Main): G06F-017/00
File Segment: EPI

 9/5/27   (Item 21 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011860004   **Image available**
WPI Acc No: 1998-276914/199825
XRPX Acc No: N98-217823
 Multimedia information server system used in WWW, internet - decides size
 of image blocks and decimation priority of each block of multimedia data,
 based on reception capacity **of terminal which raises** demand **for data**
Patent Assignee: NEC CORP (NIDE)
Inventor: ARIGA K
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 10091562	A	19980410	JP 96265220	A	19960913	199825	B

US 5920865   A   19990706   S 97928346   A   19970912   1   33

Abstract (Basic): JP 10091562 A
        The system includes a gate way (11) which is installed between a
LAN to which an information server (15) is connected, and a low speed
wireless network to which a wireless mobile terminal (13) is connected.
The multimedia information comprises screen information divided into
multiple image blocks. The gate way, on receiving data acquisition
request from a terminal, notifies the reception capacity of the
terminal to the information server.
        The information **server** decides the **size** of the image blocks and
their decimation priorities according to the capacity of the terminal.
The multimedia data are then transmitted to the terminal through the
gate way.
        ADVANTAGE - Improves transmission efficiency and operability.
        Dwg.1/7
Title Terms: INFORMATION; SERVE; SYSTEM; DECIDE; SIZE; IMAGE; BLOCK;
  DECIMATE; PRIORITY; BLOCK; DATA; BASED; RECEPTION; CAPACITY; TERMINAL;
  RAISE; DEMAND; DATA
Derwent Class: T01; W01; W02
International Patent Class (Main): G06F-013/00; G06F-017/00
International Patent Class (Additional): H04L-012/56; H04N-007/173
File Segment: EPI

 9/5/28   (Item 22 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011859952   **Image available**
WPI Acc No: 1998-276862/199825
XRPX Acc No: N98-217771
  Terminal equipment connected to client-server network - alters size **of
  data read from** server **in accordance with value of resource required for
  reading of files stored in server**

Abstract (Basic): JP 10091496 A
        The terminal equipment includes a calculator (5) to compute
resource required to read out several files simultaneously. A resource
request unit (6) transmits a request to secure the computed resource in
the server (1). A file reader (8) reads file based on the request from
the **server** , data **size** read out from the **server** is altered in
accordance to the value of the resource required for reading of each
file.
        USE - In e.g. video **server** . ADVANTAGE - Reduces receiving buffer
size . Utilizes resource effectively. Shortens response **time** for each
send out **request** .
        Dwg.1/15
Title Terms: TERMINAL; EQUIPMENT; CONNECT; CLIENT; SERVE; NETWORK; ALTER;
  SIZE; DATA; READ; SERVE; ACCORD; VALUE; RESOURCE; REQUIRE; READ; FILE;
  STORAGE; SERVE
Index Terms/Additional Words: VIDEO; ON; DEMAND

06882114   **Image available**
DEVICE AND METHOD FOR SUPPORTING ESTIMATION OF WORKLOAD AND STORAGE MEDIUM
STORING PROGRAM

PUB. NO.:   2001-109622 [JP 2001109622 A]
PUBLISHED: April 20, 2001 (20010420)
INVENTOR(s):   SAKURABA NORIKO
APPLICANT(s):   TOSHIBA CORP
APPL. NO.:   11-287108 [JP 99287108]
FILED: October 07, 1999 (19991007)
INTL CLASS: G06F-009/06

ABSTRACT
PROBLEM TO BE SOLVED: To improve accuracy in the workload estimation of a
project.

SOLUTION: Concerning   the   workload   estimation   supporting   device   for
supporting the estimation of **workload   required** for executing a project,
this **device** is provided with a workload estimate information input means
3 for inputting **workload** estimate information **required** for estimating
the **workload** of the project, workload estimating means 6 for estimating
the workload on the basis of the inputted workload estimate information,
workload result information input means 8 for inputting the workload result
information of respective projects, error analytic means 14 for analyzing
an error between the workload estimate information estimated by the
workload estimating means and the workload result information inputted by
the workload result information input means, and error cause input means 16
for inputting an error cause estimated to the error analyzed result of this
error analytic means.

06649097   **Image available**
METHOD AND DEVICE FOR INSPECTION

PUB. NO.:   2000-234915 [JP 2000234915 A]
PUBLISHED: August 29, 2000 (20000829)
INVENTOR(s):   INAGAKI DAISUKE
                SAEKI KAZUTO
                IKUSHIMA YASUHISA
APPLICANT(s):   KEYENCE CORP
APPL. NO.:   11-034909 [JP 9934909]
FILED: February 12, 1999 (19990212)
INTL CLASS: G01B-011/24

ABSTRACT
PROBLEM TO BE SOLVED: To provide an inspection method and inspection device
wherein the **workload** and the time **necessary** for forming a reference
image to be compared with an image picked up from an object to be inspected
can be reduced, and productivity is improved.

SOLUTION: An image is picked up with an image-sensing device, and a digital
image signal of an obtained reference object to be inspected is displayed
as a display image on a display unit (S102). When adjustment of display
position of the display image displayed on the display **device** is
necessary (S105: Y), address conversion processing that the display image
is rotated and/or moved in parallel is performed (S106). The image of the
inspection reference object is so converted that the direction of a line
passing two points is longitudinal or transversal, e.g. when a distance

between the two points ⬤ inspected. The display imag⬤hose display
position is adjusted is stored as a reference image (S108). The stored
reference image is read when the image is compared with an image picked up
from an object to be inspected.

17/5/13   (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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013178353   **Image available**
WPI Acc No: 2000-350226/200030
XRPX Acc No: N00-262430
  **Acceptability testing for capacity planning of data storage system,
  involves evaluating at least one performance** requirement **model for each**
  workload **in a group**
Patent Assignee: HEWLETT-PACKARD CO (HEWP)
Inventor: BOROWSKY E L; GOLDING R A; MERCHANT A A; SPASOJEVIC M; WILKES J;
  GOLDING R; MERCHANT A
Number of Countries: 020 Number of Patents: 002
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
WO 200022530   A1   20000420   WO 99US23804   A   19991013 200030 B
US 6119174   A   20000912   US 98172114   A   19981013 200046

Priority Applications (No Type Date): US 99379204 A 19990821; US 98172114 A
  19981013
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
WO 200022530 A1 E 33 G06F-011/34
  Designated States (National): JP
  Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU
  MC NL PT SE
US 6119174   A   G06F-013/10

Abstract (Basic): WO 200022530 A1
      NOVELTY - Performance **requirement** model for each **workload** in a
  group are determined. Each model is an increasing function of request
  rate which is being approximated by distribution process describing
  ON/OFF behavior of given workload. A computer then evaluates at least
  one model in the group to determine whether data storage **device**
  satisfies the performance **requirement** .
      DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for
  apparatus for testing data storage devices.
      USE - For testing acceptability for capacity planning of data
  storage system of a large enterprise.
      ADVANTAGE - Provides quick and efficient test for determining
  whether a performance requirement is satisfied by a data storage device
  that is assigned a group of workloads.
      DESCRIPTION OF DRAWING(S) - The figure shows flowchart of a method
  for determining whether performance requirement is satisfied for a
  given group of workload assigned to the data storage device.
      pp; 33 DwgNo 4/9
Title Terms: ACCEPT; TEST; CAPACITY; PLAN; DATA; STORAGE; SYSTEM; EVALUATE;
  ONE; PERFORMANCE; REQUIRE; MODEL; GROUP
Derwent Class: T01
International Patent Class (Main): G06F-011/34; G06F-013/10
International Patent Class (Additional): G06F-011/30; G06F-017/30;
  G06F-017/60
File Segment: EPI

17/5/18   (Item 12 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012253453   **Image availa●le**
WPI Acc No: 1999-059560/199905
XRPX Acc No: N99-044377
  **Processing capability modelling method in multiuser computer system –
  involves determining utilization percentage of CPU of modelled computer
  system based on its calculated busy time**
Patent Assignee: ORACLE CORP (ORAC-N)
Inventor: DELUCA S A; RIST A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5848270	A	19981208	US 96692077	A	19960802	199905	B

Priority Applications (No Type Date): US 96692077 A 19960802
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5848270	A		15	G06F-009/00	

Abstract (Basic): US 5848270 A
     The method involves calculating busy time for a CPU (104) of a
  modelled computer system (100) subjected to a selected **work load** by
  calculating time **required** for the CPU to perform total number of
  reads and writes necessary to perform a transaction separately. The
  computed time for the CPU to perform the total number of reads and
  writes for transaction is thus calculated and added. Then utilization
  percentage for the CPU subjected to the selected work load is
  determined based on the calculated busy time.
     Then, the modelled computer system equipped with this CPU is
  compared with another existing computer system having another CPU. The
  utilization percentage of CPU of the modelled computer system, is
  scaled to provide utilization percentage of the CPU of the existing
  computer system. Then, it is determined whether utilization percentage
  of the existing computer system when subjected to selected work load,
  is less than selected limit. Based on the determined utilization
  percentage, it is determined whether the CPU of the modelled computer
  system is able to operate satisfactorily when subjected to work load.
     USE - For sizing computer system such as optical and mechanical
  computers.
     ADVANTAGE - Indicates processor, memory and mass storage
  requirement for **computer system** , without **requiring** that
  computer system actually be constructed and tested. Avoids need for
  extensive consultant review of numerous currently operating server
  systems.
     Dwg.1/4
Title Terms: PROCESS; CAPABLE; MODEL; METHOD; COMPUTER; SYSTEM; DETERMINE;
  PERCENTAGE; CPU; MODEL; COMPUTER; SYSTEM; BASED; CALCULATE; BUSY; TIME
Derwent Class: T01
International Patent Class (Main): G06F-009/00
File Segment: EPI

 17/5/21   (Item 15 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011492492   **Image available**
WPI Acc No: 1997-470405/199743
XRPX Acc No: N97-392533
  **Computer-implemented capacity planning system for multiprocessor
  client-server computer environments – accepts workload parameters, e.g.
  number of users, disk storage required, average number of transactions
  per second per user, disk accesses per transaction and network bandwidth,
  and outputs report describing new system configuration**
Patent Assignee: NCR CORP (NATC)
Inventor: BHAT K V
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week

US 5668995   A   19970916   S 94231538   A   19940422   1   43   B

Abstract (Basic): US 5668995 A
        The capacity planning system provides a correctly sized and
    configured computer **system** in response to user specified
    requirements . The user specified **requirements** comprise **workload**
    parameters. The generated output from the capacity planning generally
    comprises a recommended multiprocessor computer system, the number of
    processors needed in the **system** , the amount of memory **required** , and
    the configuration of a disk subsystem suitable for the system,
    including the number of disk drives, the size of each of the disk
    drives, and how they should be configured for best performance.
        The generated output from the capacity planning system further
    comprises a list price, discounted price, maintenance costs and
    price/performance indicator for the identified computer system
    configuration. The capacity planning system can also generate output
    describing probable system configurations and pricing from other
    vendors to provide a competitive analysis for the user. The output also
    includes the average response time performance of the configured system
    for the specified workload, a summary of the resource utilization, and
    a bottleneck analysis.
        Dwg.2,3/3
Title Terms: COMPUTER; IMPLEMENT; CAPACITY; PLAN; SYSTEM; MULTIPROCESSOR;
    CLIENT; SERVE; COMPUTER; ENVIRONMENT; ACCEPT; PARAMETER; NUMBER; USER;
    DISC; STORAGE; REQUIRE; AVERAGE; NUMBER; TRANSACTION; PER; SECOND; PER;
    USER; DISC; ACCESS; PER; TRANSACTION; NETWORK; BANDWIDTH; OUTPUT; REPORT;
    DESCRIBE; NEW; SYSTEM; CONFIGURATION
Derwent Class: T01; W01
International Patent Class (Main): G06F-015/00
File Segment: EPI

DIALOG(R)File 350:Derwent WPIX
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011179416   **Image available**
WPI Acc No: 1997-157341/199715
XRPX Acc No: N97-129875
  **Computer data processing system with workload usage measuring capability
  - running cycle soaker task when CPU is not performing workload task,
  measuring total cycles run by CPU for task, and subtracting soaker
  cycles from total cycles**
Patent Assignee: SUN MICROSYSTEMS INC (SUNM); FULLER B (FULL-I)
Inventor: FULLER B
Number of Countries: 007 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 762286	A1	19970312	EP 96650034	A	19960801	199715	B
JP 9134299	A	19970520	JP 96223727	A	19960826	199730	
US 5797115	A	19980818	US 95518668	A	19950824	199840	
EP 762286	B1	20000223	EP 96650034	A	19960801	200015	
DE 69606745	E	20000330	DE 606745	A	19960801	200023	
			EP 96650034	A	19960801		

Priority Applications (No Type Date): US 95518668 A 19950824
Cited Patents: 3.Jnl.Ref; DE 2558368; EP 320329; JP 4062644
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 762286	A1	E	12	G06F-011/34	
Designated States (Regional): DE FR GB IT NL					
EP 762286	B1	E		G06F-011/34	
Designated States (Regional): DE FR GB IT NL					
DE 69606745	E			G06F-011/34	Based on patent EP 762286
JP 9134299	A		12	G06F-011/34	
US 5797115	A			G06F-019/00	

Abstract (Basic): EP 762286 A
     The method measures central processing unit (CPU) (3) usage
  required to execute a predetermined **workload** that includes system
  overhead usage of the CPU as well as direct usage of the **CPU** . The
  CPU is driven to **run** processing cycles to perform a workload task
  (22) or to perform a cycle soaker task. A cycle soaker task **runs**
  directly on the **CPU** and has no system overhead.
     The cycle soaker task runs whenever there is no workload task ready
  to run. A monitor module measures (28) the total of all cycles run and
  soaker cycles **run** by the **CPU** from beginning to end of execution of
  the workload. CPU usage attributable to the workload is measured (30)
  by deducting the soaker cycles from the total of all cycles.
     ADVANTAGE - Quick and efficient way to manage computing system.
     Dwg.3/7
Title Terms: COMPUTER; DATA; PROCESS; SYSTEM; MEASURE; CAPABLE; RUN; CYCLE;
  SOAK; TASK; CPU; PERFORMANCE; TASK; MEASURE; TOTAL; CYCLE; RUN; CPU; TASK
  ; SUBTRACT; SOAK; CYCLE; TOTAL; CYCLE
Derwent Class: T01
International Patent Class (Main): G06F-011/34; G06F-019/00
International Patent Class (Additional): G06F-009/46
File Segment: EPI

05583641   **Image available**
ESTIMATION DEVICE AND ESTIMATION METHOD

ABSTRACT
PROBLEM TO BE SOLVED: To prepare an accurate required period estimation
matching with concrete circumstances.

SOLUTION: Respective modules for constituting a software to be developed
and module attributes are inputted from a module input means 1 and the
respective processes of development and process attributes are inputted
from a process input means 2. Constraints relating to the development are
inputted from a constraint input means 3. A workload calculation means 5
calculates the workload of respective operation units based on the modules,
the module attributes, the processes and the process attributes and a
period calculation means 6 calculates the estimation of a **required** period
based on the **workload** , a schedule and result data. **Required** personnels
are allocated to the operation units and the schedule is prepared
(scheduling is performed) by a scheduling means 3. A check means 7 checks
whether or not the estimation is suited to the constraints such as a
delivery date or the like. When they are not satisfied, the schedule is
corrected by the rearrangement of the required personnels or the like.

03614555   **Image available**
LOAD CONTROL SYSTEM

ABSTRACT
PURPOSE: To suppress the dispersion caused by workers against load by
making process load control into two-system control including worker
elements from one-system control formed of only equipment elements.

CONSTITUTION: A work information storage part 2 is stored with **work   load**
 detail information such as process **required** time constituted of

preparatory time, work ti⬤ automatic processing time and⬤ansport time
on the basis of the process load detail information ⬤ a process
information storage part 1. A load computing part 3 computes the respective
loads of a worker and equipment from the work load detail information in
the work table of the work information storage part 2. The load computing
part 3, for instance, computes the worker's load constituted of preparatory
time, work time and transport time, and the equipment load constituted of
preparatory time, work time and automatic processing time. A load piling
part 4 piles the load computed by the load computing part 3 worker by
worker and equipment by equipment, as well as a load piled information
storage part 5 is stored with the load piled by the load piling part 4.

22/5/21   (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

012525966   **Image available**
WPI Acc No: 1999-332072/199928
XRPX Acc No: N99-249707
 Estimating procedure of workload in designing using CAD - involves
 integrating information extracted from file for drawing and multiplying
 it with estimated number of sheets required for drawing
Patent Assignee: HITACHI LTD (HITA)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
JP 11120209   A   19990430 JP 97284893   A   19971017 199928 B

Priority Applications (No Type Date): JP 97284893 A 19971017
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 11120209   A   4 G06F-017/50

Abstract (Basic): JP 11120209 A
     NOVELTY - **Workload   required** for design completion is estimated
  with drawing size based on preset information on drawing stored in file
  (2). The stored information is extracted and integrated. Estimated
  number of sheets required for drawing, is multiplied with the
  integrated information for finalizing the **workload   required** for
  design.
     USE - For estimating workload in designing using CAD.
     ADVANTAGE - Accuracy of progress prehension of design operation in
  design service using CAD system is raised. DESCRIPTION OF DRAWING(S) -
  The figure shows a CAD terminal with design progress control terminal.
  (2) File.
     Dwg.1/4
Title Terms: ESTIMATE; PROCEDURE; DESIGN; CAD; INTEGRATE; INFORMATION;
  EXTRACT; FILE; DRAW; MULTIPLICATION; ESTIMATE; NUMBER; SHEET; REQUIRE;
  DRAW
Derwent Class: T01
International Patent Class (Main): **G0**

23/5/1   (Item 1 from f● 347)
DIALOG(R)File 347:JAPIO
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06562546   **Image available**
ELECTRONIC EQUIPMENT

PUB. NO.:   2000-148279 [JP 2000148279 A]
PUBLISHED: May 26, 2000 (20000526)
INVENTOR(s):   TANAKA HIDEKI
APPLICANT(s): FUNAI ELECTRIC CO LTD
               FUNAI ELECTRIC ENG CO LTD
APPL. NO.:   10-321838 [JP 98321838]
FILED: November 12, 1998 (19981112)
INTL CLASS: G06F-001/04; G06F-001/32; H03K-003/02

ABSTRACT
PROBLEM TO BE SOLVED: To reduce the power consumption of an electronic
equipment without lowering its performance by controlling it so as to
reduce the clock signal frequency received from a clock signal generation
part when a clock control type operating part is kept in a halt state.

SOLUTION: A CPU 2 monitors based on a monitor **program** whether a clock
control **type** operating part is kept in a halt state and then variably
controls the clock frequency. In other words, the **CPU** 2 **functions** to
reduce the clock frequency of the clock signal received from a PLL part 1b
down to the lowest level from the initial level in a halt state excluding
the **time** when the interrupt **requests** are given from a keyboard, an I/O
such as a mouse 20, a LAN 15, a modem 17, a VIDEO 14, a voice equipment 16,
etc., and also when a memory 13 is accessed. In such a constitution, the
power consumption can be significantly reduced even when a personal
computer, for example, is apparently operating as long as the corresponding
I/O bus is temporarily set in a halt state in a period when a sheet of
image data is transferred to a video chip and then the next data are
transferred in an operation reproduction mode.

23/5/3   (Item 3 from file: 347)
DIALOG(R)File 347:JAPIO
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05870993   **Image available**
INFORMATION PROCESSING SYSTEM, DEVICE AND ITS CONTROLLING METHOD

PUB. NO.:   10-154093 [JP 10154093 A]
PUBLISHED: June 09, 1998 (19980609)
INVENTOR(s):   KUROSAWA TAKAHIRO
APPLICANT(s): CANON INC [000100] (A Japanese Company or Corporation), JP
               (Japan)
APPL. NO.:   08-313489 [JP 96313489]
FILED: November 25, 1996 (19961125)
INTL CLASS: [6] G06F-012/00; G06F-012/00
JAPIO CLASS: 45.2 (INFORMATION PROCESSING -- Memory Units)
JAPIO KEYWORD:R131 (INFORMATION PROCESSING -- Microcomputers &
               Microprocessers); R138 (APPLIED ELECTRONICS -- Vertical
               Magnetic & Photomagnetic Recording)

ABSTRACT
PROBLEM TO BE SOLVED: To set an appropriate referring method of shared data
for each information processor and to reduce data traffic between
information **processors** in a cooperative **operation** .
SOLUTION: A reference **class** generation processing **program** 21 of each
client sets a reference class which designates a data updation timing for
data sharing. A reference request processing program 22 notifies a **server**
of a set reference **class** together with a data **request** . A reference
request **time** server side processing program 11 sends requested data to

a client and maintains a notified parameter. When data update occurs, an update **request** **time** server side processing program 12 and a data updating program 23 update data which is held by a client in a timing that is designated by a reference class.

23/5/4   (Item 4 from file: 347)
DIALOG(R)File 347:JAPIO
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05808360   **Image available**
INFORMATION PROCESSOR

PUB. NO.:   10-091460 [JP 10091460 A]
PUBLISHED: April 10, 1998 (19980410)
INVENTOR(s):   HASEGAWA TETSUO
APPLICANT(s):   TOSHIBA CORP [000307] (A Japanese Company or Corporation), JP
                (Japan)
APPL. NO.:   08-243903 [JP 96243903]
FILED: September 13, 1996 (19960913)
INTL CLASS: [6] G06F-009/46
JAPIO CLASS: 45.1 (INFORMATION PROCESSING -- Arithmetic Sequence Units)

ABSTRACT
PROBLEM TO BE SOLVED: To surely permit the whole intentions of an application task which is independently generated based on a different request to reflect on a controlled system by providing a means, etc., for executing a request processing based on the request synthesized by a synthesizing means.

SOLUTION: When a service processor is applied to a computer system for controlling the **running** of a train, the service **processors** 10-30 receive a **speed** as the **request** at every train and provide service for giving an output to the driving device of the corresponding train in order to execute transition to the received speed. Necessity degree in the respective devices 10-30 is within the range from 0 to 10, a value more than 8, especially is made to be for the application task of a protection system and a **time** limit, etc., for keeping the **request** is used as a keeping condition. The devices 10-30 at every train processes the opposite request from an application program which is independently programmed based on request specification from three **kinds** of different phases as the **application** task for giving the request to the respective devices 10-30.

23/5/12   (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012998473   **Image available**
WPI Acc No: 2000-170325/200015
XRPX Acc No: N00-126582
  Functional testing procedure of microprocessor
Patent Assignee: ADVANCED MICRO DEVICES INC (ADMI)
Inventor: PARKER A; SKROVAN J C
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6016554	A	20000118	US 97901576	A	19970728	200015	B

Priority Applications (No Type Date): US 97901576 A 19970728
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6016554	A		16	G06F-011/00	

Abstract (Basic): US 6016554 A
      NOVELTY - A microprocessor model (12) is coupled to memory model
   (16) via bus model (14). The **microprocessor** is adapted to perform an
   activity of interest that occurs for multiple clock cycles and to

respond to a control si●●l. The test result produced d●●g the
activity of the interes●●is compared with the expected r●●ult and the
process is repeated until the activity of interest matches expected
result.
        DETAILED DESCRIPTION - The trigger event signal is applied to
microprocessor prior to initiating performance of **activity** of
interest. The trigger event signal is a predetermined combination of
address, data and control signals. A control signal generator generates
control signal predetermined **time** delay, after receiving the trigger
event signal. The **time** delay is incremented and the process is
repeated until the activity of interest matches expected result. The
test engine (18) is coupled to microprocessor model (12) to initiate
execution of testing program and to check proper **operation** of other
elements of **microprocessor** of test **group** during execution of the
testing **program** .
        USE - For functional testing of microprocessor.
        ADVANTAGE - As delay time is initialized to the number of system
clock cycles, and is incremented during each time the **program** **group**
is executed until the test result is matched, the microprocessor
properly responds to a control signal by performing the target
activity.
        DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of
microprocessor test group.
        Microprocessor model (12)
        Bus model (14)
        Memory model (16)
        Test engine (18)
        pp; 16 DwgNo 1/6
Title Terms: FUNCTION; TEST; PROCEDURE; MICROPROCESSOR
Derwent Class: T01
International Patent Class (Main): G06F-011/00
File Segment: EPI

 23/5/16   (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011120266   **Image available**
WPI Acc No: 1997-098191/199709
    Query **processing method esp. in real-** time **database management system**
    - using data definition and data manipulation language and also database
    support group , database **kernel** group , database **back-up** group
    and database **query** group
Patent Assignee: KOREA ELECTRONICS & TELECOM RES (KOEL-N); KOREA TELECOM
    CORP (KOTE-N)
Inventor: JANG S; KIM U; PARK Y; U W
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
KR 9503682   B1 19950417 KR 9124053   A   19911223 199709 B

Priority Applications (No Type Date): KR 9124053 A 19911223
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
KR 9503682   B1   1 H04M-003/22   .

Abstract (Basic): KR 9503682 B
        The method adds the required functions and registers the relations
by using the data definition language. The method also adds the
required data by using the data manipulation language. The distributed
Database Management System (DBMS) consists of an Access Switching
Subsystem (ASS) (1), an Interconnection Network Subsystem (INS) (2),
and a Central Control Subsystem (CCS)(3).
        The system also includes a DBM (4), a local database (5), an Access
Switch Processor (ASP) (6), an Interconnection Network Processor (INP)
(7), and a Number Translation **Processor** (NTP) (8). An **Operation** and
Maintenance **Processor** (OMP) (9) and a Man Machine **Processor** (MMP)

(10) are also **used** .
    ADVANTAGE - Does n◯ increase system load.
    Dwg.1/1
Title Terms: QUERY; PROCESS; METHOD; REAL-TIME; DATABASE; MANAGEMENT;
  SYSTEM; DATA; DEFINE; DATA; MANIPULATE; LANGUAGE; DATABASE; SUPPORT;
  GROUP; DATABASE; KERNEL; GROUP; DATABASE; BACK-UP; GROUP; DATABASE; QUERY
  ; GROUP
Derwent Class: T01; W01
International Patent Class (Main): H04M-003/22
International Patent Class (Additional): H04M-003/42
File Segment: EPI

23/5/17   (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011120265
WPI Acc No: 1997-098190/199709
  Method of processing limit time **of** transaction **execution in real-**
  time **database management system**
Patent Assignee: KOREA ELECTRONICS & TELECOM RES (KOEL-N); KOREA TELECOM
  CORP (KOTE-N)
Inventor: IM J; LEE K; U W
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
KR 9503681   B1   19950417   KR 9124052   A   19911223 199709 B

Priority Applications (No Type Date): KR 9124052 A 19911223
Patent Details:
Patent No   Kind Lan Pg   Main IPC   Filing Notes
KR 9503681   B1   H04M-003/22

Abstract (Basic): KR 9503681 B
      The method that decreases the load of transaction manager and
   distributes the processing load to each program is provided. The
   processing of the execution limit **time** of the **transaction** is
   executed in the user interface transaction library that is linked with
   in the compile time of application program. The distributed DBMS
   consists of an ASS (Access Switching Subsystem) (1), an INS
   (Interconnection Network Subsystem) (2), a CCS (Central Control
   Subsystem) (3), DBMS (4), a local database (5), an ASP (Access
   Switching Processor) (6), an INP (Interconnection Network Processor)
   (7), a NTP (Number Translation **Processor**) (8), an OMP (**Operation**
   and Maintenance **Processor**) (9), a MMP (Man Machine Processor) (10), a
   DBSG (**Database** Supportion **Group**), a DBKG (**Database** Kernel **Group**
   ), a DBBG (**Database** Backup **Group**), and a DBQG (**Database** Query
   Group).
Title Terms: METHOD; PROCESS; LIMIT; TIME; TRANSACTION; EXECUTE; REAL; TIME
  ; DATABASE; MANAGEMENT; SYSTEM
Derwent Class: T01; W01
International Patent Class (Main): H04M-003/22
File Segment: EPI

DIALOG(R)File 350:Derwent WPIX
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007527495   **Image available**
WPI Acc No: 1988-161427/198823
XRPX Acc No: N88-123277
  **Selective non-manual power controller for data processing equipment -
  accepts requests from command source to power on selected units and
  activates signals at power central interfaces**
Patent Assignee: UNISYS CORP (BURS)
Inventor: ENGEL G L; GEORGESON P J; MUELLER D R; **QUERNEMOEN J M** ; TODD B C
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 4747041	A	19880524	US 83508296	A	19830627	198823	B

Priority Applications (No Type Date): US 83508296 A 19830627
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4747041	A		52		

Abstract (Basic): US 4747041 A
     The controller apparatus provides the selective, non-manual control
of power to computer equipment from a central location. It accomplishes
this by automatically remotely powering on or off any one or more
components of a system or systems. The controller apparatus accepts
requests from a command source or sources to power off or sequentially
power on those units selected by the command source.
     These requests are interpreted by the controller apparatus which
activates certain signals based upon this interpretation at its power
control interfaces to the appropriate units. It also provides selective
reporting via the system interface of the status (ON/OFF) of a
referenced controlled units.
     ADVANTAGE - Optimal control of conservation of electrical energy.
     2/21
Title Terms: SELECT; NON; MANUAL; POWER; CONTROL; DATA; PROCESS; EQUIPMENT;
  ACCEPT; REQUEST; COMMAND; SOURCE; POWER; SELECT; UNIT; ACTIVATE; SIGNAL;
  POWER; CENTRAL; INTERFACE
Derwent Class: T01
International Patent Class (Additional): G06F-009/00; G06F-015/56
File Segment: EPI

DIALOG(R)File 350:Derwent WPIX
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003879667
WPI Acc No: 1984-025205/198405
XRPX Acc No: N84-018951
  **Multi-processing system partitionable for different applications - has
  sub-system access including interface receiving partitioning requests
  from command sources, and its identification**
Patent Assignee: SPERRY CORP (SPER); UNISYS CORP (BURS)
Inventor: CAMPBELL R P; KRISCUNAS J G; **QUERNEMOEN J M** ; VOLTZ T R
Number of Countries: 010 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 99244	A	19840125	EP 83303963	A	19830707	198405	B
US 4484270	A	19841120	US 82395936	A	19820707	198449	
CA 1186414	A	19850430				198522	
EP 99244	B	19901024				199043	
DE 3381954	G	19901129				199049	

Priority Applications (No Type Date): US 82395936 A 19820707
Cited Patents: A3...8709; No-SR.Pub; US 3253262; US 3641505; US 3812469; US
  3832695

Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
EP 99244   A E 11
   Designated States (Regional): CH DE FR GB IT LI NL SE
EP 99244   B
   Designated States (Regional): CH DE FR GB IT LI NL SE

Abstract (Basic): EP 99244 A
       The system comprises several sub-systems physically interconnected
   and is operable under software control. A sub-system access unit is
   provided to enable and disable the sub-system interconnections
   according to the configuration required. The access unit comprises a
   unit available interface and a system panel interface coupled to
   several sources of portioning command signals. A store for cabling
   information representing the types and physical interconnections of the
   components of the system is provided. It also stores the state of
   portioning of the system .
       A data processor is arranged to receive a portioning change
   request from a portioning command source. It also produces, from
   information identifying the command source and from the stored
   information, a signal rejecting the portioning change request or
   switching signals for enabling and disabling the sub-system
   interconnections.
Title Terms: MULTI; PROCESS; SYSTEM; APPLY; SUB; SYSTEM; ACCESS; INTERFACE;
  RECEIVE; PARTITION; REQUEST; COMMAND; SOURCE; IDENTIFY
Derwent Class: T01; W01
International Patent Class (Additional): G06F-009/46; G06F-013/00;
  G06F-015/16
File Segment: EPI

Set	Items	Description
S1	1833	(SIZING OR SIZE OR SIZES)(5N)(SERVER? ? OR WEBSERVER? ? OR DATABASE? ? OR DBMS OR RDBMS)
S2	13425	(REQUIR? OR NEEDS OR NECESS? OR DEMAND? ? OR CONFIGUR?)(3N-)(SERVER? OR WEBSERVER? OR APPLICATION? OR PROGRAM? ? OR SOFT-WARE OR DATABASE? OR DBMS OR RDBMS)(3N)(HARDWARE OR CLIENT? ? OR PC? ? OR COMPUTER? ? OR WORKSTATION? ?)
S3	10013	(REQUIR? OR NEEDS OR NECESS? OR DEMAND? ? OR CONFIGUR?)(3N-)(SERVER? OR WEBSERVER? OR APPLICATION? OR PROGRAM? ? OR SOFT-WARE OR DATABASE? OR DBMS OR RDBMS)(3N)(TERMINAL? ? OR DEVICE? · ? OR EQUIPMENT OR MACHINE? ? OR OPERATING)
S4	80400	(WORKLOAD? ? OR WORK()LOAD? ? OR PROCESSING OR PERFORMANCE OR CAPACITY)(5N)(REQUIR??? OR REQUIREMENT? ? OR NEEDS OR NECE-SSARY OR NECESSIT???? OR DEMAND? ?)
S5	116486	(TYPE? ? OR KIND? ? OR SORT? ? OR FAMILY OR CATEGORY OR CL-ASS OR BRAND? ? OR VARIET??? OR GROUP? ?)(5N)(SERVER? ? OR WE-BSERVER? ? OR APPLICATION? ? OR PROGRAM? ? OR SOFTWARE? ? OR -DATABASE? ? OR DBMS OR RDBMS)
S6	81668	(PROCESSOR? OR MICROPROCESSOR? OR PROCESSING()UNIT OR CPU -OR MPU)(5N)(UTILIZ? OR UTILIS? OR USE? ? OR ACTIVE OR BUSY OR WORKING OR OPERAT??? OR OPERATION? ? OR FUNCTION? ? OR FUNCTI-ONING OR RUN???? OR ACTIVE OR ACTIVIT???)
S7	6941	(PROCESSOR? OR MICROPROCESSOR? OR PROCESSING()UNIT OR CPU -OR MPU)(5N)(IDLE? ? OR IDLING OR INACTIV? OR INOPERA? OR REST? OR WAIT? OR LATENC??? OR LATENT)
S8	89823	(TRANSACTION? ? OR ACTIVIT??? OR PROCESSES OR ACTION? ? OR EVENT? ? OR JOB? ? OR TASK? ? OR REQUEST? ? OR QUERY OR QUERI-ES)(5N)(RATE OR SPEED OR TIME OR SECOND? ? OR MINUTE? ?) OR T-PS
S9	153	CAPACITY()PLANNING
S10	46	SIZING(5N)(SERVER? ? OR WEBSERVER? ? OR DATABASE? ? OR DBMS OR RDBMS)
S11	65	S9:S10(S)(S4:S8 OR BENCHMARK? ?) OR ((S9:S10)/AB AND (S4:S8 OR BENCHMARK? ?)/AB)
S12	47	S11 AND IC=G06F
S13	331	(WORKLOAD? ? OR WORK()LOAD? ?)(5N)(REQUIR??? OR REQUIREMEN-T? ? OR NEEDS OR NECESSARY OR NECESSIT???? OR DEMAND? ?)
S14	2	S1(S)S13 OR (S1/AB AND S13/AB)
S15	206	S5(S)S6:S7(S)S8 OR (S5/AB AND (S6:S7)/AB AND S8/AB)
S16	21	S1(S)S5(S)S6:S7(S)S8 OR (S1/AB AND S5/AB AND (S6:S7)/AB AND S8/AB)
S17	1237	S2:S3(S)S4
S18	3148	S2:S3(S)S5:S8
S19	5	S2:S3(S)S13 OR ((S2:S3)/AB AND S13/AB)
S20	98674	(REQUIR??? OR REQUIREMENT? ? OR NEEDS OR NECESSARY OR NECE-SSIT???? OR DEMAND? ?)(5N)(SERVER? ? OR WEBSERVER? ? OR APPLI-CATION? ? OR PROGRAM? ? OR SOFTWARE? ? OR DATABASE? ? OR DBMS OR RDBMS)
S21	232370	(REQUIR??? OR REQUIREMENT? ? OR NEEDS OR NECESSARY OR NECE-SSIT???? OR DEMAND? ?)(5N)(HARDWARE OR CLIENT? ? OR PC? ? OR -COMPUTER? ? OR SYSTEM? ? OR WORKSTATION? ? OR TERMINAL? ? OR -DEVICE? ? OR EQUIPMENT OR MACHINE? ? OR OPERATING)
S22	76	S13(S)S20:S21 OR (S13/AB AND (S20:S21)/AB)
S23	37	(S19 OR S22) AND IC=G06F
S24	62	S2:S3(S)S5(S)S6:S7(S)S8 OR ((S2:S3)/AB AND S5/AB AND (S6:S-7)/AB AND S8/AB)
S25	46	S24 AND IC=G06F
S26	638	(S20:S21)/AB AND (S5:S8)/AB
S27	75	(S2:S3)/AB AND (S5:S8)/AB
S28	42	S27 AND IC=G06F
S29	61	S4(S)S5(S)S6:S7(S)S8 OR (S4/AB AND S5/AB AND (S6:S7)/AB AND S8/AB)
S30	44	S29 AND IC=G06F

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S31       5    S4/TI,AB A   S5(S)S6:S7(S)S8 AND IC=G06F
S32      33    S13(S)S5:S    R (S13/AB AND (S5:S8)/AB)
S33       3    S13/AB AND S5:S8
S34       1    AU="QUERNEMOEN JOHN MICHAEL"
```

.12/5,K/3   (Item 3 from ●e: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01305095
Performance monitoring in distributed systems
Leistungsuberwachung in verteilten Systemen
Controle de performance dans des systemes distribues
PATENT ASSIGNEE:
  Agilent Technologies, Inc., (2885686), 395 Page Mill Road, Palo Alto, CA
    94306, (US), (Applicant designated States: all)
INVENTOR:
  Burch, Jefferson B., 3510 La Mata Way, Palo Alto, California 94306, (US)
LEGAL REPRESENTATIVE:
  Powell, Stephen David et al (52311), WILLIAMS, POWELL & ASSOCIATES 4 St
    Paul's Churchyard, London EC4M 8AY, (GB)
PATENT (CC, No, Kind, Date): EP 1117045 A2 010718 (Basic)
APPLICATION (CC, No, Date):   EP 2001300068 010105;
PRIORITY (CC, No, Date): US 480041 000110
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: **G06F-011/34**

ABSTRACT EP 1117045 A2
    A distributed system that provides performance monitoring capability
    across multiple nodes 20-24 of a distributed application includes a set
    of nodes 20-24 that communicate via a network. A distributed application
    is performed by a set of cooperating node applications 50-54 executing in
    the nodes 20-24. The distributed system implements techniques for
    generating time-stamp records for each of a set of significant events
    associated with one or more of the node applications 50-54. The
    time-stamp records provides a synchronized time base across the nodes
    20-24 for the significant events thereby enabling temporal ordering of
    the significant events.
ABSTRACT WORD COUNT: 97
NOTE:
  Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):
  Application: 010718 A2 Published application without search report
  Assignee: 010801 A2 Transfer of rights to new applicant: Agilent
                             Technologies Inc. (2929951) a Delaware
                             Corporation 395 Page Mill Road Palo Alto, CA
                             94303 US
  Assignee: 010808 A2 Transfer of rights to new applicant: Agilent
                             Technologies Inc. a Delaware Corporation
                             (2929950) 395 Page Mill Road Palo Alto, CA
                             94303 US
  Assignee: 011010 A2 Transfer of rights to new applicant: Agilent
                             Technologies, Inc. (a Delaware corporation)
                             (2885689) 395 Page Mill Road Palo Alto, CA
                             94303 US
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
      CLAIMS A (English) 200129   504
      SPEC A   (English) 200129   4253
Total word count - document A   4757
Total word count - document B   0
Total word count - documents A + B   4757

INTERNATIONAL PATENT CLASS: **G06F-011/34**

...SPECIFICATION as well as events to return the appropriate information to
  the requesting web browser.
    A capability to record the timing of events in a distributed
  application may be useful for a **variety** of system management tasks

such as performance monit●ng, diagnosis, and **capacity** ●anning . For
example, a record of the timing of events may be useful for identifying
bottlenecks in a distributed application that hinder overall performance.
Unfortunately, prior...

12/5,K/4   (Item 4 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00665733
Optimization of manufacturing resource planning.
Optimierung der Betriebsmittelplanung.
Optimisation de planification des ressources de fabrication.
PATENT ASSIGNEE:
  INTERNATIONAL BUSINESS MACHINES CORPORATION, (200125), Old Orchard Road,
    Armonk, N.Y. 10504, (US), (applicant designated states: DE;FR;GB)
INVENTOR:
  Dietrich, Brenda L., 1946 Glen Rock Street, Yorktown Heights, New York
    10598, (US)
  Wittrock, Robert J., Apt.5-3, Bridle Path, Ossining, New York 10562, (US)
LEGAL REPRESENTATIVE:
  Schafer, Wolfgang, Dipl.-Ing. (62021), IBM Deutschland
    Informationssysteme GmbH Patentwesen und Urheberrecht, D-70548
    Stuttgart, (DE)
PATENT (CC, No, Kind, Date): EP 639815 A2 950222 (Basic)
                              EP 639815 A3 950927
APPLICATION (CC, No, Date):   EP 94112631 940812;
PRIORITY (CC, No, Date): US 108014 930816
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **G06F-017/60**

ABSTRACT EP 639815 A2
  A method for constrained material requirements planning, optimal
resource allocation, and production planning provides for an optimization
of a manufacturing process by designating the amounts of various
manufactured products to be produced, which products include both end
products as well as subassemblies to be employed in the manufacture of
one or more of the end products. In order to accomplish the optimization,
the method employs an objective function such as the maximization of
income in a situation wherein there are limitations on the inventory of
raw materials and tools to be employed in the manufacturing process. Data
describing elemental steps in the manufacturing process for the
production of each end product, as well as the quantity or demand for
each end product which is to be supplied, are presented as a set of
linear mathematical relationships in matrix form to be inserted in a
computer which determines the optimum number of each end product in
accordance with an LP optimization algorithm. The matrix contains bill of
material data, and various constraints such as a constraint on the sum of
products shipped and used as subassemblies, and constraints based on
inventory, on available time for use of resources such as tools, and on
inventory left over from an early production run for a later run. (see
image in original document)
ABSTRACT WORD COUNT: 221

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application: 950222 A2 Published application (A1with Search Report
                             ;A2without Search Report)
 Examination: 950809 A2 Date of filing of request for examination:
                             950612
 Search Report: 950927 A3 Separate publication of the European or
                             International search report
 Withdrawal: 961009 A2 Date on which the European patent application
                             was withdrawn: 960820
 *Assignee: 970205 A2 Applicant (transfer of rights) (change):
                             International Business Machines Corporation
                             (200120) Old Orchard Road Armonk, N.Y. 10504
                             (US) (applicant designated states: DE;FR;GB)

LANGUAGE (Publication,Proce●al,Application): English; Engl●; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
       CLAIMS A (English)   EPAB95   3597
       SPEC A   (English)   EPAB95   15573
Total word count - document A   19170
Total word count - document B   0
Total word count - documents A + B   19170

INTERNATIONAL PATENT CLASS: **G06F-017/60**

...SPECIFICATION final period, production and shipment schedule correspond
   to an allocation of resources that minimizes the value of the final
   inventory.
       16. A method for material **requirements** planning, **capacity**
   planning , and production planning and resource allocation for
   manufacturing processes that include alternate means for producing
   products.
       Specifically, in Step 1, data describing the demand, inventory...

...schedule and the production schedule are inserted to the MRP system, the
   CRP system, and the other manufacturing information system.
       17. A method for material **requirements** planning, **capacity**
   planning , and production planning and resource allocation for
   manufacturing processes that include separation operations in which a
   single part number is transformed into one or more...

 12/5,K/6   (Item 6 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00365793
**Measuring utilization of processor shared by multiple system control
     programs.**
**Messung der Verwendung eines von mehrfachen Systemsteuerprogrammen anteilig
     genutzten Prozessors.**
**Mesure de l'utilisation de processeur partage par plusieurs programmes de
     commande de systeme.**
PATENT ASSIGNEE:
  AMDAHL CORPORATION, (628801), 1250 East Arques Avenue, Sunnyvale
     California 94088-3470, (US), (applicant designated states: DE;FR;GB)
INVENTOR:
  Ellsworth, Robert S., 1626 198th Place, S.E. Issaquah Washington 98027,
     (US)
LEGAL REPRESENTATIVE:
  Crawford, Andrew Birkby et al (29761), A.A. THORNTON & CO. Northumberland
     House 303-306 High Holborn, London WC1V 7LE, (GB)
PATENT (CC, No, Kind, Date): EP 346009 A2 891213 (Basic)
                              EP 346009 A3 910327
APPLICATION (CC, No, Date):   EP 89305541 890601;
PRIORITY (CC, No, Date): US 205301 880610
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **G06F-011/34**
CITED REFERENCES (EP A):
  MINI-MICRO SYSTEMS, vol. XXII, no. 2, February 1989, pages 72-76; D.
     PLAUGER: "Timing is everything"
  IBM TECHNICAL DISCLOSURE BULLETIN, vol. 14, no. 3, August 1971, pages
     942-945; R. BAIRD: "Application performance evaluator"
  ELECTRONICS, vol. 58, no. 26, July 1985, pages 28,30; L. WALLER: "Dual
     operating systems: a compromise in quest for a standard"
  COMPUTER DESIGN, vol. 23, no. 3, March 1984, pages 30,32; Anonymous:
     "Multiple operating systems coexist on multiprocessor system"
  COMPUTER, vol. 8, no. 11, November 1975, pages 51-61; G.J. NUTT:
     "Tutorial: Computer system monitors";

ABSTRACT EP 346009 A2
     In a computer system wherein control of a processor is time multiplexed

among more than one syste●ontrol program, the utilizatio● y a system
control program of the processor during a predetermined time interval is
determined by accumulating processor idle time for said system control
program during said time interval, adjusting the processor idle time
accumulated for said system control program by time periods wherein said
system control program does not have control of the processor; and
subtracting said real idle time from said interval time to obtain CPU
busy time.
ABSTRACT WORD COUNT: 95

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application: 891213 A2 Published application (A1with Search Report
                               ;A2without Search Report)
 Search Report: 910327 A3 Separate publication of the European or
                               International search report
 Examination: 910828 A2 Date of filing of request for examination:
                               910702
 Examination: 931103 A2 Date of despatch of first examination report:
                               930916
 Withdrawal: 950705 A2 Date on which the European patent application
                               was deemed to be withdrawn: 950103
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
     CLAIMS A (English)   EPABF1   942
       SPEC A (English)   EPABF1   2283
Total word count - document A   3225
Total word count - document B   0
Total word count - documents A + B   3225
INTERNATIONAL PATENT CLASS: **G06F-011/34**

...SPECIFICATION its own domain, and run a production system in one domain
   while developing and testing a new application in another domain.
      To tune and provide **capacity   planning** for computer system, a
   knowledge of its **CPU   utilization** becomes important.
      CPU   utilization is usually measured in terms of its busy time. In
   conventional SCPs such as the VM/370 and MVS, CPU busy time is measured
   by...

 12/5,K/8   (Item 8 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00240361
Data base processor and its method of operation.
Datenbankprozessor und Betriebsverfahren dafur.
Processeur d'une base de donnees et son procede de mise en oeuvre.
PATENT ASSIGNEE:
   International Business Machines Corporation, (200120), Old Orchard Road,
      Armonk, N.Y. 10504, (US), (applicant designated states: DE;FR;GB;IT)
INVENTOR:
   Dahlin, Par Arne, Skoldalsvagen 15C, S-191 51 Sollentuna, (SE)
   Dahlen, Bjorn Gustaf, Vesslevagen 14, S-181 09 Lidingo, (SE)
   Redziejowski, Roman Richard, Ceremonimastarvagen 10, S-181 40 Lidingo,
      (SE)
   Sandin, Henrik Emanuel, Boholmsstigen 2, S-181 46 Lidingo, (SE)
LEGAL REPRESENTATIVE:
   Johansson, Lars E. et al (23225), IBM Svenska AB Intellectual Property
      Department 4-01, S-163 92 Stockholm, (SE)
PATENT (CC, No, Kind, Date): EP 244625 A1 871111 (Basic)
                              EP 244625 B1 920129
APPLICATION (CC, No, Date):   EP 87104572 870327;
PRIORITY (CC, No, Date): SE 861973 860429
DESIGNATED STATES: DE; FR; GB; IT
INTERNATIONAL PATENT CLASS: **G06F-013/14 ;   G06F-015/16 ;   G06F-015/40**
CITED PATENTS (EP A): US 3889237 A; US 4044337 A; US 4078254 A

ABSTRACT EP 244625 A1

    In a data processing system a data base processor includes data base
means (32) storing a plurality of tables and a data base manager (31)
comprising a command router (34) and a plurality of command processors
(80-92). Select, Copy, Create and Fit command processors (85,88,89,90)
are used to select a portion of a stored source table, copy it into a
target table, create new rows and fill them with new data. The source
table and the target table can be compared by presenting them as a view
on a user terminal. The target table may be located in the same data base
as the source table or in an auxiliary data base connectable and
disconnectable to and from the main data base. A production control
dialog (70) is used for data source and data base identification and
modification purpose.
    The data base processor is preferably used as a Service Level Reporter
(SLR) including a main data base for actual data and an auxiliary data
base for forecasting data.
ABSTRACT WORD COUNT: 172

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application: 871111 A1 Published application (A1with Search Report
                             ;A2without Search Report)
 Examination: 880420 A1 Date of filing of request for examination:
                             880224
 Change: 880727 A1 Representative (change)
 Examination: 890830 A1 Date of despatch of first examination report:
                             890713
 Change: 900307 A1 Representative (change)
 Grant: 920129 B1 Granted patent
 Oppn None: 930120 B1 No opposition filed
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
       CLAIMS B (English) EPBBF1   1070
       CLAIMS B (German)   EPBBF1   920
       CLAIMS B (French)   EPBBF1   1382
       SPEC B   (English) EPBBF1   6441
Total word count - document A   0
Total word count - document B   9813
Total word count - documents A + B 9813

INTERNATIONAL PATENT CLASS: **G06F-013/14** ...
... **G06F-015/16** ...

... **G06F-015/40**

...SPECIFICATION the system indicating response times and the quantity of
   the service provided by various departments or other groupings. Reports
   can also be provided for various **processors** , channels and **device
   utilizations** or they can disclose information useful for **capacity
   planning** or accounting etc. Reports can further be provided on the
   availability of VTAM network resources, such as application programs,
   control units and communication lines.
     All...

...the SLR data base manager 31 is invoked from batch 12 or TSO 8 as
   indicated by lines 21 and 20 to the main line **module** 33 in DBM **31** .
     The main line load module 33 is **used to** initialize main storage
   areas, service routines and the SLR data base 32.
     According to the present invention the SLR data base 32 comprises a
   plurality...time range
   - forecasting algorithm
   - options (e.g. replace/noreplace)
   - where to store the forecast (data base name, table name, new key
   column values)
     Several tasks **require** a forecasting function:
    Usage and **Performance** Planning and Follow-up
     Capacity   Planning
    Accounting

The relations between the tasks and the SLR forecasting function is
described below.
    Usage and Performance Planning and Follow-up: By creating forecasts for
...

...column could be excluded), and the data column TOT-CPU. ADDRSTAT
-Address Space Load Statistics, is a summary table containing address
space statistics summarized by **systems** and projects. **This** table could
then be filled with forecast data by means of SLR forecasting, and then,
as data is collected into the ADDRSTAT table, reports with the difference
between the forecasted and actual CPU time usage can be generated.
    Capacity   Planning :
    The forecasting function can be used to extrpolate the past usage of
any resource measured by SLR into the future planning period. The user
will...

...establishing a price per unit
  measuring usage
  computing charges
  billing users
    The SLR Forecasting function will be implemented through the COPY,
CREATE, and FIT commands.
     To be able to run the **Forecasting** application, the user must **have**
  two data bases, one Forecasting data base 41 (ddname MAINFILE, update
mode), and a Base data base 42 containing the normal SLR measurement data
(user-defined...

 12/5,K/11   (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00859421   **Image available**
**SYSTEM, METHOD, AND ARTICLE OF MANUFACTURE FOR AN AUTOMATED SCRIPTING
    SOLUTION FOR ENTERPRISE TESTING**
**SYSTEME, PROCEDE ET PRODUIT PERMETTANT UNE SOLUTION DE SCRIPT INFORMATISE
    POUR MISE A L'ESSAI EN ENTREPRISE**
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
  HASWELL John Jeffrey, 13231 Wrenn House Lane, Herndon, VA 20171, US,
  YOUNG Robert J, 6R Sackville St. Apt. 2, Charleston, MA 02129, US,
  SCHRAMM Kevin, 1 Longpoint Lane, Rose Valley, PA 19063, US,
Legal Representative:
  HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly, LLP, P.O. Box
    52037, Palo Alto, CA 94303, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200193043 A1 20011206 (WO 0193043)
  Application: WO 2001US9610 20010323 (PCT/WO US0109610)
  Priority Application: US 2000535586 20000327; US 2000536214 20000327; US
    2000536879 20000327
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CO CR CU CZ DE
  DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK
  LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL
  TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
 (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: **G06F-011/36**
Publication Language: English
Filing Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 77236

English Abstract
    A system, method and article of manufacture are provided for affording an
    automated scripting solution for enterprise testing. First, a
    table-driven automated scripting architecture is provided. Then, a test
    script is developed using the table-driven automated scripting
    architecture. A synchronized execution of the test script is then
    performed. Finally, metrics of the synchronized execution of the test
    script are outputted.

French Abstract
    La presente invention concerne un systeme, un procede et un produit
    permettant une solution de script informatise pour mise a l'essai en
    entreprise. Une architecture de script informatise gere par table est
    d'abord pourvue, puis un script d'essai est developpe, par utilisation de
    ladite architecture de script informatise gere par table. Une execution
    synchronisee dudit script d'essai est alors realisee et la metrologie de
    l'execution synchronisee dudit script d'essai est finalement produite.

Legal Status (Type, Date, Text)
Publication 20011206 A1 With international search report.
Publication 20011206 A1 Before the expiration of the time limit for
                         amending the claims and to be republished in the
                         event of the receipt of amendments.
Examination   20020207 Request for preliminary examination prior to end of
                         19th month from priority date

Main International Patent Class: **G06F-011/36**
Fulltext Availability:
  Detailed Description

Detailed Description
... data from the event/data generation, event processing, and
  repositories components and then send data to the presentation or
  repositories components. Management applications tools include **capacity
  planning** tools, performance management tools, ficense management tools,
  remote management tools, systems monitoring tools, scheduling tools, help
  desk tools, etc.. Some Ente,rprise Management tools even...

...management operations framework. As Corporate Internets and Extranets
  implement Web based software products to sell and advertise business
  services, corresponding administrative, security, event notification and
  performance   requirements must be performed similarly for the companies
  web based system. The two critical path issues are security management
  and network management.

  Security Management
  Security Management...

 12/5,K/20   (Item 12 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00793243   **Image available**
ORGANIZATION OF INFORMATION TECHNOLOGY FUNCTIONS
ORGANISATION DE FONCTIONS DE TECHNOLOGIE DE L'INFORMATION
Patent Applicant/Assignee:
  ANDERSEN CONSULTING L L P, 100 South Wacker Drive, Chicago, IL 60603, US,
    US (Residence), US (Nationality)
Inventor(s):
  DOVE Shari L, 21336 Williamsburg Court, Kildeer, IL 60047, US,
  EDWARDS John R, 3482 Montreal Way, Tucker, GA 30084, US,
  FLYNN Margaret M, 3942 N. Paulina Street, Chicago, IL 60613-2518, US,
  GHOSH Nirmalya, 5000 Wright Terrace, Skokie, IL 60077, US,
  PITT Robert C, 20 St. Phillips Road, London E8 3BP, GB,
  ROEDERSHEIMER Jeffrey, 2900 N. Burling Street, Chicago, IL 60657, US,
  RYAN Hugh W, 17075 Yearling Lane, Wadsworth, IL 60083, US,
  SIGMUND Larry A, 443 Sunset Drive, Crystal Lake, IL 60014, US,

SMITH Cathern M, 1416 W. ⬤rose #1, Chicago, IL 60657, US⬤
Legal Representative:
  RICHARDS Marc V (agent), Brinks Hofer Gilson & Lione, P.O. Box 10087,
    Chicago, IL 60610, US,

English Abstract
  The invention concerns a framework for information technology within a
  modern enterprise. The framework contains the functions required to
  effectively support a modern enterprise including customer service (10),
  service integration (20), capability development (40), change
  administration (50), strategy and architecture planning (60), general
  management and administration (70), human performance management (80),
  governance and strategic relationships (90). The invention discloses how
  the several functions interact to form a structure that can manage data
  and information using computer technology in modern enterprises including
  governmental and non-governmental organizations, and commercial
  enterprises.

French Abstract
  L'invention concerne une structure pour la technologie de l'information
  au sein d'une entreprise moderne. L'organisation contient les fonctions
  necessaires a assister une entreprise de maniere efficace du point de vue
  de la technologie de l'information. L'invention se rapporte a la maniere
  dont les differentes parties interagissent pour former une structure
  capable de gerer des donnees et des informations dans des entreprises
  modernes, l'entreprise etant une organisation gouvernementale, une
  organisation non-gouvernementale, ou une entreprise commerciale.

Detailed Description
... planning defines the key business requirements and business drivers
  that will determine what information technology resources are needed for
  a specific application during a given **time** frame.

  A group or **task** for resource data gathering collects the key data
  needed for the purpose of building a capacity model and performing

capacity planning . The ●formation for data gathering c●s from a variety of sources, both manual and automated. Historical, as well as current data, is gathered in order to understand resource utilization trends, identify peak process periods, and plan for future **processing demands** . One of the most important aspects of data gathering is accuracy.

I 0 The accuracy of the data directly impacts the accuracy of the capacity...

12/5,K/21   (Item 13 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00793242   **Image available**
METHOD AND ESTIMATOR FOR PROVIDING CAPACITY MODELING AND PLANNING
TECHNIQUE ET ESTIMATEUR POUR LA MODELISATION ET LA PLANIFICATION DE LA CAPACITE
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
  BOND William C, 21325 North White Pine, Kildeer, IL 60047, US,
Legal Representative:
  RICHARDS Marc V (agent), Brinks Hofer Gilson & Lione, P.O. Box 10087,
    Chicago, IL 60610, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200125876 A2-A3 20010412 (WO 0125876)
  Application: WO 2000US27795 20001006 (PCT/WO US0027795)
  Priority Application: US 99158259 19991006
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ
  DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
  LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
  SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: **G06F-017/60**
Publication Language: English
Filing Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 10591

English Abstract
  A method for providing or building a capacity modeling and planning
  function in an information technology organization includes conducting
  the tasks involved in building the capacity modeling. A delivery phase
  includes capacity analysis stage 102, a capactiy release design stage
  104, a capacity release built and test stage (106), and a deployment
  stage (108). The projet may have milestone including plan delivery
  approval (110), authorization to build and test (112) and authorization
  for deployment (114).

French Abstract
  Cette invention concerne une technique permettant d'assurer ou de creer
  une fonction de modelisation et de planification de la capacite dans une
  organisation specialisee dans les technologies de l'information,
  technique qui passe par l'execution de taches en rapport avec la mise en
  place de ladite fonction. Ces taches consistent a ordonnancer, analyser,
  concevoir, tester et deployer la fonction de modelisation et de la
  planification de la capacite. Chacune de ces taches se subdivise en
  elements sous-jacents concernant les processus, l'organisation et la
  technologie.

Main International Patent Class: **G06F-017/60**
Fulltext Availability:
  Detailed Description
Detailed Description
... and requirement planning task defines key business requirements and
  business drivers to determine what IT resources are needed for a specific
  application during a given **time** frame.

The resource data gathering **task** collects key data for building a
capacity model and performing **capacity** **planning** . The information for
data gathering comes from a variety of sources, both manual and
automated.

Historical and current data are gathered to understand resource
utilization...and SUBSTITUTE SHEET (RULE 26)
and systems may involve multiple organizations. This generally adds
complexity to the systems.

Net-centric considerations include net centric data **types** , fat **servers**
,
thin clients, and push **software** distribution. Net-centric data **types**
may
increase from the introduction of net-centric technologies. Sites may
contain images, audio and video clips, Java Applets or ActiveX controls,
all of which
must be part of traditional backup and restore plans and part of network
capacity models. Storage and network **capacity** **planning** should allow
for the increased size of these file **types** . Fat **servers** occur when
file access is
1 0 granted to the broader Internet community. Performance degradation
becomes an issue as large numbers of users download files...should be
performed.

In thin client net-centric environments, there is a greater reliance on
the server for storage of personal files. This will increase **capacity**
requirements for
servers and networks and should be considered when performing **capacity**
 planning .

Push software distribution presents new considerations to **capacity**
 planning processes. For example, average **capacity** **requirements** may
decrease with push architectures because users no longer waste bandwidth
polling for new software or content updates. However, peak **capacity**
 requirements may increase because updates are simultaneously pushed to
all subscribers when they become available.

Figure 3 is a representation of the task package to survey...
...evaluation. The goals are to provide software selection criteria and to
identify the potential vendors
SUBSTITUTE SHEET (RULE 26)
having the ability to satisfy key **capacity** **planning** **requirements**
with their packaged software products.

If modeling software is required, the modeling approach selected
dictates what the component options are. The modeling approach may be...
responsibility for on-going capacity modeling and
planning activity need a combination of business management and
technology skills. Technology skills include in-depth knowledge of.

  capacity **planning** and modeling concepts and techniques;

elements making up the e⬤onment (Servers, Clients, IDA⬤
communications, etc.);
all modeling tools used, and the configuration of the tools...

...and performance reporting;
the capacity modeling and planning process and the SLA's in place;
and
business capability requirements and how they translate to application
  requirements and then into technology infrastructure **processing**
volumes and system utilization.

In addition to technology skills, capacity modeling and planning
personnel need common business administration and business management
skills, such as the...processes 5550. This task package includes the
following tasks: train
5 capacity planning team 5551, complete data gathering procedures 5552,
develop baseline model 5553, model **capacity** demand 5555, and prepare
  capacity planning document 5557. This task package designs and
programs
the capacity modeling & planning components that make up the base models,
including extensions to reused and packaged...

...problems.

Once the base model has been tested, calibrated, and approved, the
model's utilization projections are analyzed and resource configuration
alternatives that satisfy the **capacity requirements** are developed.
The ongoing **capacity** modeling and planning team as well as the key
business users who will be involved in **capacity planning** in the
future should be heavily involved in executing the product test. The cost
of each viable alternative is determined. The benefits are documented.
The...

 12/5,K/22   (Item 14 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00792496   **Image available**
METHOD AND ESTIMATOR FOR PROVIDING STORAGE MANAGEMENT
TECHNIQUE ET ESTIMATEUR POUR LA GESTION DES MOYENS DE STOCKAGE
Patent Applicant/Assignee:
  ANDERSEN CONSULTING L L P, 100 South Wacker Drive, Chicago, IL 60603, US,
    US (Residence), US (Nationality)
Inventor(s):
  MILLES Daniel, 8216 Cloverdale Lane, Rockford, IL 61107, US,
  BOND William C, 21325 North White Pine, Kildeer, IL 60047, US,
Legal Representative:
  RICHARDS Marc V (agent), Brinks Hofer Gilson & Lione, P.O. Box 10087,
    Chicago, IL 60610, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200126012 A1 20010412 (WO 0126012)
  Application: WO 2000US27802 20001006 (PCT/WO US0027802)
  Priority Application: US 99158259 19991006
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ
  DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
  LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
  SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: **G06F-017/60**
International Patent Class: **G06F-019/00 ; G06F-017/30**
Publication Language: English
Filing Language: English
Fulltext Availability:
  Detailed Description

Claims
Fulltext Word Count: 13075

English Abstract
A system and method for storage management of an information technology
environment provides the tasks involved in building the storage
management function. The tasks include the planning (110), analyzing
(3510), designing (2410), building (5550), testing (5590), and deploying
(7170) of the storage management function. Each task includes process,
organization, and technology infrastructure elements.

French Abstract
Cette invention concerne un systeme et une technique de gestion des
moyens de stockage dans le secteur des technologies de l'information, qui
passent par l'execution de taches en rapport avec la mise en place de
ladite fonction. Ces taches consistent a ordonnancer (110), analyser
(3510), concevoir (2410), realiser (5550), tester (5590) et deployer
(7170) la fonction de gestion des moyens de stockage. Chacune de ces
taches se subdivise en elements sous-jacents concernant les processus,
l'organisation et la technologie.

Fulltext Availability:
  Claims

Claim
...   when
  1 0 assessing best practice opportunities.
  Task 2118: Refine Storage Management Architecture Requirements
  This task includes defining storage management architecture
  requirements, and allocating the **requirements** across changes to human
   performance , business process, and technology. Preferably, the task
  1 5 includes using the current assessment, constrains assessment, and
  best practice research to generate the requirements for...

...the changes according to organization
  and performance improvements, process improvements, and technology
  improvements.
  The task includes reviewing any existing service level agreements for
  storage management **performance** and operational **requirements** .
  Functional
   requirements define what the storage management system will do;
   performance   **requirements** define how well it will operate.
  Task 2119: Update Storage Management Architecture Performance
  Model
  This task includes defining the metrics and ...and aligning the metrics
  and target service levels with performance provisions for the various
  storage management functions as outlines in SLA's.
  The storage architecture **performance** model defines the overall design
   requirements for the storage management function.
  Figure 2 depicts the stages in managing a project 1 00. After
  completing a planning phase 102, the project reaches...

...defining the skills needed for the critical tasks.
  Skills may be required in all or many of the following areas:
  1 . Systems Management/Administration and **Capacity   Planning** ;

2 Operations Architecture

3 Resource Management;

4 Task Planning.
Where the infrastructure is widely distributed or the data volumes are high, the storage management function...a portion of the production environment is used as the "test" application.
The task includes verifying that the interfaces to other operations components, such as **capacity planning** and system monitoring, are included in the test plan.
Task 5593: Execute Technology Infrastructure Product Test
1 0 This task includes verifying that the technology...apparatus for providing an estimate for building a storage management
function in an information technology system. The method and apparatus generate a preliminary work estimate (**time** by **task**) and financial estimate (dollars by classification) based on input of a set of estimating factors that identify the scope and difficulty of key aspects to...

...underlying reasoning for a specific estimating factor.
Table 1
Estimating Factors Number Difficul Definition
# of Platforms 4 M A Platform is a unique combination of **serveri** , **type** and operating system
# of Service Level 4 M The number of service level agreements for Agreements which the organization has controlling responsibility
of storage 3...

...of applications and databases
Databases with specific SM parameters. This may include both custom and packaged applications.
of storage 2 M A component is a **software program** , or a management **group** of **programs** which operate as an Components entity
# of storage 3 M A role is a set of related responsibilities management Roles which make up all or...

...21 0 by the
consultant, client, or both. An example of a worksheet is shown in Figs. 17a
and 17b. The default estimates of the **time** required for each **task** will
populate the worksheet, with **time** estimates based on the number factors and difficulty rating previously assigned to the estimating factors that correspond to each **task** . The amount of **time** per **task** is based on a predetermined **time** per unit required for the estimating factor multiplied by a factor corresponding to the level of difficulty.
Each task listed on the worksheet is described...

...of this invention, e.g., any organization wishing to use a storage management system within an information technology system. In addition, there are many different **types** of computer systems, and computer **software**
and hardware, that may be utilized in practicing the invention, and the invention is not limited to the examples given above. Accordingly, it is the...

12/5,K/25 (Item 17 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00792408 **Image available**
DEVELOPMENT ARCHITECTURES FOR NETCENTRIC COMPUTING SYSTEMS
ARCHITECTURES DE DEVELOPPEMENT POUR SYSTEMES INFORMATIQUES A RESEAU

CENTRALISE

English Abstract
  A development architecture for a netcentric computing system that
  includes at least one server connected with a client. The server provides
  a common user interface between the server and the client. In addition,
  the server also provides at least one process management tool, at least
  one personal productivity tool, at least one quality management tool, at
  least one system building tool, at least one environment management tool,
  at least one program and project management tool, at least one personal
  productivity tool and at least one information management tool that is
  used in the development of the netcentric computing system.

French Abstract
  L'invention concerne une architecture de developpement destinee a un
  systeme informatique a reseau centralise, comprenant au moins un serveur
  relie a un client. Le serveur constitue une interface utilisateur
  courante entre le serveur et le client. De plus, le serveur offre
  egalement au moins un outil de gestion de procede, au moins un outil de
  productivite personnelle, au moins un outil de gestion de la qualite, au
  moins un outil de genie cognitif, au moins un outil de gestion de
  l'environnement, au moins un outil de gestion des programmes et des
  projets, au moins un outil de productivite personnelle et au moins un
  outil de gestion de l'information, utilises dans le developpement du
  systeme informatique a reseau centralise.

●   ●

Detailed Description
... of files and applications.

The managing change tools 90 are used for making, tracking, and
distributing changes to the development architecture 10. The most common
type of change is upgrading of **software** (system, architecture, or
application), but changes to hardware configurations and network
configurations must also be supported. The service planning tools 92
support a **capacity planning** function for the development architecture
IO. The environment needs to be
23
monitored and sufficient lead time allowed to support **required**
capacity changes for shared disk space, server size (e.g., central
processing unit size, memory, and number of users), network, and
workstations (either the number of...

 12/5,K/43   **(Item 35 from file: 349)**
DIALOG(R)File 349:PCT FULLTEXT
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00559157   **Image available**
ACCEPTABILITY TESTING FOR CAPACITY PLANNING OF A DATA STORAGE SYSTEM
ESSAI D'ACCEPTABILITE EN VUE DE LA PLANIFICATION DE LA CAPACITE D'UN
    SYSTEME DE STOCKAGE DE DONNEES
Patent Applicant/Assignee:
  HEWLETT-PACKARD COMPANY,
Inventor(s):
  BOROWSKY Elizabeth Lynn,
  GOLDING Richard,
  MERCHANT Arif,
  SPASOJEVIC Mirjana,
  WILKES John,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200022530 A1 20000420 (WO 0022530)
  Application: WO 99US23804 19991013 (PCT/WO US9923804)
  Priority Application: US 98172114 19981013; US 99379204 19990821
Designated States: JP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: **G06F-011/34**
Publication Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 5214

English Abstract
  Data storage devices of an enterprise system are tested to determine
  whether the enterprise system is optimally configured. Each data storage
  device is tested to determine whether it can satisfy a performance
  requirement for an assigned group of n workloads. A group of n
  inequalities are generated, and only up to n of the inequalities may be
  evaluated to determine whether the device satisfies the performance
  requirement for the assigned group of workloads. The inequalities are
  based on a phased, correlated model of I/O activity.

French Abstract
  On effectue des essais sur des organes de stockage de donnees d'un
  systeme d'entreprise afin de determiner si ce dernier est configure de
  facon optimale. On procede a des essais sur chaque organe de stockage de
  donnees afin de determiner s'il satisfait aux exigences de performance
  pour un groupe donne de n charges de travail. On produit un groupe de n
  inegalites et on n'evalue au maximum que n inegalites afin de determiner
  si l'organe satisfait aux exigences de performance pour le groupe donne
  de charges de travail. Les inegalites sont etablies sur la base d'un
  modele phase et correle de l'activite d'entree/sortie.

Main International Patent Class: G06F-011/34
Fulltext Availability:
  Detailed Description

Detailed Description
...   DESCRIPTION OF THE INVENTION
  As shown in the drawings for purposes of illustration, the invention is
  embodied in a method and apparatus for testing whether **performance
  requirements** are satisfied if a given group of workloads is assigned to
  a data storage device. The test is based on a phased, correlated model of
  ...

  ...the group of workloads assigned to the device. The testing is simple and
  it - 5 can be performed quickly, which makes it especially desirable for
  capacity planning of large enterprise systems.

  In the paragraphs that follow, the testing will first be described in
  connection with a single data storage device. Then, the...

  12/5,K/44   (Item 36 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00551294   **Image available**
HARDWARE/SOFTWARE MANAGEMENT, PURCHASING AND OPTIMIZATION SYSTEM
SYSTEME DE GESTION, D'ACHAT ET D'OPTIMISATION DE MATERIEL/LOGICIEL
Patent Applicant/Assignee:
  ISOGON CORPORATION,
  BARRITZ Robert,
Inventor(s):
  BARRITZ Robert,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200014667 A1 20000316 (WO 0014667)
  Application: WO 99US20168 19990902 (PCT/WO US9920168)
  Priority Application: US 9899629 19980908
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
  FI GB GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV
  MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG
  US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ
  TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI
  CM GA GN GW ML MR NE SN TD TG
Main International Patent Class: **G06F-017/60**
International Patent Class: **G06F-017/50**
Publication Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 12245

English Abstract
  The invention provides for tracking and day-to-day management of
  technical requirements, cost and environmental details of existing
  computer data centers, and the creation of scenarios for determining the
  optimum acquisition, expansion and reconfiguration strategies of the data
  centers as well as the forecasting of technical requirements, costs and
  environmental requirements of existing and proposed configurations of the
  data centers. A knowledge base comprises technical and financial
  specifications of various storage devices and other computer hardware as
  provided. A modeling tool allows for the creation of various "What-If"
  scenarios of possible data center configurations for long term
  projections of the technical and financial requirements of existing,
  modified or proposed data center configurations. The cost of individual
  devices, systems or data center locations, as well as the cost of
  proposed new equipment including software are tracked. Also provided is
  the ability to present technical, financial and other information of a
  data center of various levels, such as at the configuration, location,
  system and individual device levels, as well as the ability to prepare

custom reports, tables and charts of the information.

French Abstract
   L'invention concerne un systeme assurant le suivi et la gestion courante
   de besoins techniques, de details de couts et d'environnement de centres
   de donnees informatiques existants, et la mise en oeuvre de scenarios
   pour determiner des strategies d'acquisition, d'expansion et de
   reconfiguration optimales des centres de donnees, ainsi que la prevision
   des besoins techniques, des besoins en matiere de couts et
   d'environnement de configurations existantes et proposees des centres de
   donnees. Une base de connaissances comporte des specifications techniques
   et financieres de divers dispositifs de stockage et d'autre materiel
   informatique. Un outil de modelisation permet de produire divers
   scenarios de simulation de configurations de centres de donnees possibles
   pour obtenir des projections a long terme des besoins techniques et
   financiers de configurations de centres de donnees existants, modifies ou
   proposes. On recherche le cout de dispositifs individuels, d'emplacements
   de centres de donnees ou de systemes, ainsi que le cout d'equipements
   neufs proposes, y compris de logiciels. L'invention permet egalement de
   presenter des informations techniques, financieres et autres concernant
   un centre de donnees a differents niveaux, par exemple aux niveaux de la
   configuration, de l'emplacement, des dispositifs systeme et individuels,
   et de preparer des rapports, des tableaux et des graphiques personnalises
   a partir de ces informations.

Main International Patent Class: **G06F-017/60**
International Patent Class: **G06F-017/50**
Fulltext Availability:
  Claims

Claim
...   column 9, line 8 – line 46
  Y column 31, line 13 – line 31 6@121131
  Y CHOON-LING SIA ET AL: "Predictive 6,12,13
   capacity   planning : a proactive approach"
  INFORMATION AND SOFTWARE TECHNOLOGY, MARCH
  1997, ELSEVIER, NETHERLANDS,
  vol. 39, no. 3, pages 195-204,
  XPOO0874535
  ISSN: 0950-5849
  page 201, column...

...V) 1-18
  16 September 1997 (1997 16)
  column 1, line 50 -column 2, line 10
  A GRUMMITT A: "Automating enterprise 1-18
  performance management"
   CAPACITY MANAGEMENT REVIEW, MARCH 1998,
   DEMAND TECHNOL, USA,
  vol. 26, no. 3, pages 1, 3-11, 14 - 159
  XPOO0874610
  ISSN: 1049-2194
  page 11, line 21 -page 15, line 34
  Form PCTIISA/210 (continuation of second sheet) (July 1992)
  page 2 of 2
  INTERNATIONAL SEARCH REPORT Internal I **Application** No
  Information on patent **family** members
  PCT/US 99/20168
  Patent document Publication Patent family Publication
  cited in search report date member(s) date
  US 5515524 A 07 1996 AU...

00970387
Resource scheduler
Betriebsmittelsablaufsteuerung
Planificateur de resources
PATENT ASSIGNEE:
   INTERNATIONAL BUSINESS MACHINES CORPORATION, (200123),   , Armonk, NY
      10504, (US), (applicant designated states:
      AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)
INVENTOR:
   Hough, Roger Eldred, 4803 Palisade Drive, Austin, Texas 78731, (US)
   Squillante, Mark Steven, 21 Scofield Road, Pound Ridge, New York 10576,
      (US)
   Fong, Liana Liyow, 121 Fieldpoint Drive, Ivington, New York 10533, (US)
LEGAL REPRESENTATIVE:
   Davies, Simon Robert (75452), IBM, United Kingdom Limited, Intellectual
      Property Law, Hursley Park, Winchester, Hampshire SO21 2JN, (GB)
PATENT (CC, No, Kind, Date): EP 880095   A2   981125 (Basic)
                              EP 880095   A3   990804
APPLICATION (CC, No, Date):   EP 98304030 980521;
PRIORITY (CC, No, Date): US 862044 970522
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **G06F-009/46**

ABSTRACT EP 880095 A2
   A method is disclosed of scheduling jobs to be executed by a resource
in a computer system wherein the jobs are grouped in classes, with the
job classes vying for the resource's attention being arranged in a
hierarchy. Each job class has a time-function value that controls when
the job class is selected by the resource if processing time becomes
available. Within a particular level of the hierarchy, scheduling
priorities are defined by one or more time-based functions, each of which
may be constant or dynamically varying. When constant time-based
functions are used, each job class has a schedule value that remains
fixed with time. When dynamic time-based functions are used, job class
"time-function values" are modified to alter the timing by which the job
class(es) acquire the resource.
ABSTRACT WORD COUNT: 130

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Examination: 20000329 A2 Date of request for examination: 20000129
 Application: 981125 A2 Published application (A1with Search Report
                          ;A2without Search Report)
 Change: 20000419 A2 Designated contracting states changed
                          20000301
 Search Report: 990804 A3 Separate publication of the European or
                          International search report
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
      CLAIMS A (English) 9848   868
      SPEC A   (English) 9848   8715
Total word count - document A   9583
Total word count - document B   0
Total word count - documents A + B   9583

INTERNATIONAL PATENT CLASS: **G06F-009/46**

...SPECIFICATION domains, they often have limited success, or they do not
   perform well at all in **system** environments with different **requirements**
   . Indeed, it is not unusual to find systems in which the scheduling and
   dispatching parameters must be manually adjusted in response to large
   changes in customer **workload** . This **requirement** gives rise to
   undesirable complexity and overhead. Thus, in addition to supporting
   multiple diverse scheduling...

23/5,K/7   (Item 7 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00820141
Measuring workload usage of a central processing unit.
Messung der Verwendung von der Arbeitsbelastung einer zentralen
Verarbeitungseinheit.
Mesure de l'utilisation de change de travail d'une centrale de traitement.
PATENT ASSIGNEE:
  SUN MICROSYSTEMS, INC., (1392737), 901 San Antonio Road, MS PAL01-521,
    Palo Alto, California 94303, (US), (Proprietor designated states: all)
INVENTOR:
  Fuller, Billy, 8510 Sutterfield Drive, Colorado Springs, Colorado 80920,
    (US)
LEGAL REPRESENTATIVE:
  Hanna, Peter William Derek et al (72341), Tomkins & Co., 5 Dartmouth Road
    , Dublin 6, (IE)
PATENT (CC, No, Kind, Date): EP 762286 A1 970312 (Basic)
                              EP 762286 B1 000223
APPLICATION (CC, No, Date):   EP 96650034 960801;
PRIORITY (CC, No, Date): US 518668 950824
DESIGNATED STATES: DE; FR; GB; IT; NL
INTERNATIONAL PATENT CLASS: **G06F-011/34**
CITED PATENTS (EP B): EP 320329 A; DE 2558368 A
CITED REFERENCES (EP B):
  PATENT ABSTRACTS OF JAPAN vol. 016, no. 260 (P-1369), 12 June 1992 & JP
    04 062644 A (AGENCY OF IND SCIENCE & TECHNOL), 27 February 1992,
  IBM TECHNICAL DISCLOSURE BULLETIN, vol. 22, no. 1, June 1979, NEW YORK,
    US, pages 272-275, XP002019141 L.S. ROGERS: "Microprocessor Utilization
    Indicator. June 1979."
  IBM TECHNICAL DISCLOSURE BULLETIN, vol. 37, no. 10, 1 October 1994, page
    111/112 XP000475596 "LOW-OVERHEAD PROCESSOR IDLE DETECTION IN A
    MULTITASKING OPERATING SYSTEM";

ABSTRACT EP 762286 A1
    A method and apparatus is disclosed for measuring central processing
  unit (CPU) (3) usage required to execute a predetermined workload that
  includes system overhead usage of the CPU as well as direct usage of the
  CPU. The CPU is driven to run processing cycles to perform a workload
  task (22) or to perform a CPU bound task (20). The CPU bound task is
  cycle soaker; a cycle soaker task runs directly on the CPU and has no
  system overhead. The cycle soaker task runs whenever there is no workload
  task ready to run. A monitor module measures (28) the total of all cycles
  run by the central processing unit from beginning to end of execution of
  the workload and measures the soaker cycles run by the CPU from beginning
  to end of execution of the workload. CPU usage attributable to the
  workload is measured (30) by deducting the soaker cycles from the total
  of all cycles.
ABSTRACT WORD COUNT: 157
NOTE:
  Figure number on first page: 3

LEGAL STATUS (Type, Pub Date, Kind, Text):
  Oppn None: 010207 B1 No opposition filed: 20001124
  Change: 20000216 A1 Title of invention (German) changed: 19991227
  Lapse: 020313 B1 Date of lapse of European Patent in a
                           contracting state (Country, date): DE
                           20000524, FR 20000721,
  Lapse: 010418 B1 Date of lapse of European Patent in a
                           contracting state (Country, date): FR
                           20000721,
  Application: 970312 A1 Published application (A1with Search Report
                           ;A2without Search Report)
  Grant: 20000223 B1 Granted patent
  Examination: 971022 A1 Date of filing of request for examination:

Examination: 971112 A1 0826 Date of despatch of first examination report:
                               971001
*Assignee: 990616 A1 Applicant (transfer of rights) (change): SUN
                               MICROSYSTEMS, INC. (1392737) 901 San Antonio
                               Road, MS PAL01-521 Palo Alto, California 94303
                               (US) (applicant designated states:
                               DE;FR;GB;IT;NL)
Change: 990616 A1 Title of invention (German) (change)
Change: 990616 A1 Title of invention (English) (change)
Change: 990616 A1 Title of invention (French) (change)
*Assignee: 990616 A1 Previous applicant in case of transfer of
                               rights (change): SUN MICROSYSTEMS, INC.
                               (1392735) 2550 Garcia Avenue, MS PAL1-521
                               Mountain View, California 94043-1100 (US)
                               (applicant designated states: DE;FR;GB;IT;NL)
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
     CLAIMS B   (English) 200008   1032
     CLAIMS B   (German)   200008   915
     CLAIMS B   (French)   200008   1444
     SPEC B   (English) 200008   3715
Total word count - document A   0
Total word count - document B   7106
Total word count - documents A + B   7106

INTERNATIONAL PATENT CLASS: G06F-011/34

...SPECIFICATION measuring not only the direct usage of the CPU by the
   workload but also the **system** overhead usage of the CPU **required** to
   complete the **workload** . The indirect or system overhead usage refers to
   usage of the CPU by subsystems or...

 23/5,K/8   (Item 8 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00779141
Computer system power management
Leistungssteuerung eines Computersystems
Gestion d'alimentation de systeme d'ordinateur
PATENT ASSIGNEE:
   International Business Machines Corporation, (200120), Old Orchard Road,
      Armonk, N.Y. 10504, (US), (applicant designated states: DE;FR;GB)
INVENTOR:
   Rawson, Andrew Radcliffe, 1105 Dover Pass, Cedar Park, Texas 78613, (US)
   Sotomayor Jr., Guy Gil, 6042 Sherwood Glen Way No.3, West Palm Beach,
      Florida 33415, (US)
LEGAL REPRESENTATIVE:
   Ling, Christopher John (80401), IBM United Kingdom Limited, intellectual
      Property Department, Hursley Park, Winchester, Hampshire SO21 2JN, (GB)
PATENT (CC, No, Kind, Date): EP 727728 A1 960821 (Basic)
APPLICATION (CC, No, Date):   EP 96300253 960112;
PRIORITY (CC, No, Date): US 388960 950215
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: G06F-001/32

ABSTRACT EP 727728 A1
    A method and apparatus for managing power states of at least one
   hardware resource, including registering (602) at least one hardware
   resource power state corresponding to a software process, determining
   (803) whether a current hardware resource power state fulfills the
   registered hardware resource power state corresponding to the software
   process, and modifying (804) the current hardware resource power state
   that is determined not to fulfill the registered hardware resource power
   state prior to executing the software process. (see image in original

document)
ABSTRACT WORD COUNT: 97

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Withdrawal: 20000405 A1 Date of withdrawal of application: 20000112
 Application: 960821 A1 Published application (A1with Search Report
                            ;A2without Search Report)
 Examination: 970326 A1 Date of filing of request for examination:
                            970120
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
      CLAIMS A (English)   EPAB96   702
      SPEC A   (English)   EPAB96   4747
Total word count - document A   5449
Total word count - document B   0
Total word count - documents A + B   5449

INTERNATIONAL PATENT CLASS: **G06F-001/32**

...SPECIFICATION allows system software to more accurately estimate
   critical low power condition based on the current **application**
   workload . In addition, the resource **requirement** registry process
   provides for the successful operation of multimedia and other realtime
   applications in a...

   23/5,K/18   (Item 18 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

00274713
Method for performance evaluation of a data processor system.
Verfahren fur die Abschatzung der Leistung eines Datenprozessorsystems.
Methode pour l'evaluation de performance d'un systeme processeur de
   donnees.
PATENT ASSIGNEE:
 DIGITAL EQUIPMENT CORPORATION, (313080), 146 Main Street, Maynard, MA
   01754, (US), (applicant designated states:
   AT;BE;CH;DE;ES;FR;GB;GR;IT;LI;LU;NL;SE)
INVENTOR:
 Chinnaswamy, Ackanaickenpalayam V., 8 Quail Hollow Road, Westboro, MA
   01581, (US)
 Wilk, Stanley A., 66 S. Lenox Street, Worcester, MA 01620, (US)
 Torrey, James H, Jr., 84 Potter Hill Road, Grafton, MA 01519, (US)
LEGAL REPRESENTATIVE:
 Dubois-Chabert, Guy (15351), Societe de Protection des Inventions 25, rue
   de Ponthieu, F-75008 Paris, (FR)
PATENT (CC, No, Kind, Date): EP 259224 A2 880309 (Basic)
                              EP 259224 A3 891123
                              EP 259224 B1 950510
APPLICATION (CC, No, Date):   EP 87401948 870831;
PRIORITY (CC, No, Date): US 904093 860902
DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE
INTERNATIONAL PATENT CLASS: **G06F-011/34**
CITED PATENTS (EP A): EP 98169 A
CITED REFERENCES (EP A):
 DIGITAL REVIEW, May 1986, pages 109-114, Boston, US; J. STEINBERG: "An
   expert system that helps managers tune their VAX/VMS systems isn't as
   farfetched as it sounds"
 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS '86, Toronto, 22nd-25th
   June 1986, vol. 2, pages 1225-1229, IEEE, New York, US; S.K. GOYAL et
   al.: "Expert systems in network maintenance and management"
 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS '86, Toronto, 22nd-25th
   June 1986, vol. 1, pages 206-211, IEEE, New York, US; S. BHATIA et al.:
   "Performance advisor: An analysis tool for computer communication
   systems";

ABSTRACT EP 259224 A2

A method for evaluating the performance of a data processor system includes data collection, analysis, and report generation. The data collection involves the periodic selection of a number of metrics, which are measurable values in the data processing system, and system parameters, which are system values that can be adjusted. The analysis involves the application of certain rules comparing metrics and parameters to corrresponding thresholds. The report generation includes the display of recommendations to be taken when certain rules have triggered a certain number of times, and, if desired, the presentation of displays of certain work load characteristics of either the data processor system by itself or of a network of such data processor system.

ABSTRACT WORD COUNT: 119

LEGAL STATUS (Type, Pub Date, Kind, Text):
Lapse: 20000126 B1 Date of lapse of European Patent in a
                                 contracting state (Country, date): AT
                                 19950510, BE 19950510, CH 19950510, LI
                                 19950510, GR 19950510, SE 19950810,
Application: 880309 A2 Published application (A1with Search Report
                                 ;A2without Search Report)
Search Report: 891123 A3 Separate publication of the European or
                                 International search report
Examination: 900314 A2 Date of filing of request for examination:
                                 900111
Examination: 930310 A2 Date of despatch of first examination report:
                                 930127
Grant: 950510 B1 Granted patent
Lapse: 951206 B1 Date of lapse of the European patent in a
                                 Contracting State: CH 950510, LI 950510
Lapse: 951206 B1 Date of lapse of the European patent in a
                                 Contracting State: CH 950510, LI 950510
Lapse: 960110 B1 Date of lapse of the European patent in a
                                 Contracting State: AT 950510, CH 950510, LI
                                 950510
Lapse: 960124 B1 Date of lapse of the European patent in a
                                 Contracting State: AT 950510, CH 950510, LI
                                 950510, SE 950810
Lapse: 960131 B1 Date of lapse of the European patent in a
                                 Contracting State: AT 950510, BE 950510, CH
                                 950510, LI 950510, SE 950810
Oppn None: 960501 B1 No opposition filed
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	1133
CLAIMS B	(English)	EPAB95	626
CLAIMS B	(German)	EPAB95	540
CLAIMS B	(French)	EPAB95	740
SPEC A	(English)	EPABF1	20158
SPEC B	(English)	EPAB95	15690
Total word count – document A			21293
Total word count – document B			17596
Total word count – documents A + B			38889

INTERNATIONAL PATENT CLASS: **G06F-011/34**

...SPECIFICATION and type of I/O devices in that system.
    To determine whether a particular operating **system** is performing
efficiently, it is **necessary** to analyze certain **work   load**
characteristics such as the amount of paging, swapping or free memory,
the number of computable...

...SPECIFICATION and type of I/O devices in that system.
    To determine whether a particular operating **system** is performing
efficiently, it is **necessary** to analyze certain **work   load**
characteristics such as the amount of paging, swapping or free memory,

23/5,K/21   (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00885036   **Image available**
**AUTOMATED SYSTEM AND METHOD FOR DESIGNING MODEL BASED ARCHITECTURES OF
    INFORMATION SYSTEMS**
**SYSTEME ET PROCEDE AUTOMATISES DE CONCEPTION D'ARCHITECTURES DE SYSTEMES
    D'INFORMATION A PARTIR D'UN MODELE**
Patent Applicant/Inventor:
  ABU EL ATA Nabil A, 1820 S. 181st Street, Omaha, NE 68130, US, US
    (Residence), FR (Nationality)
Legal Representative:
  Mary Lou WAKIMURA (et al) (agent), Hamilton, Brook, Smith & Reynolds,
    P.C., 530 Virginia Road, P.O Box 9133, Concord, MA 01742-9133, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200219148 A2 20020307 (WO 0219148)
  Application: WO 2001US26958 20010829 (PCT/WO US0126958)
  Priority Application: US 2000228702 20000829; US 2001942096 20010828
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU
  CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP
  KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU
  SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: **G06F-017/00**
Publication Language: English
Filing Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 5544

English Abstract
  An automated system and method is provided for system architects to
  design model based architectures of information systems. From an initial
  model of a proposed system architecture, performance metrics are modeled
  and compared against a set of user-defined business requirements. For
  unacceptable metrics, modifications to the system architecture are
  determined and proposed to the system architect. If accepted, the model
  of the system architecture is automatically modified and modeled again.
  Once the modeled performance metrics satisfy the business requirements, a
  detailed description of the system architecture derived from the model
  may be output for further development stages.
French Abstract
  L'invention concerne un systeme et un procede automatises permettant aux
  architectes de systemes de concevoir des architectures de systemes
  d'information a partir d'un modele. A partir du modele initial
  d'architecture de systeme propose, des mesures de performance sont
  modelees et comparees a un ensemble de conditions commerciales definies
  par l'utilisateur. Dans le cas de mesures inacceptables, des
  modifications de l'architecture du systeme sont definies puis proposees a
  l'architecte du systeme. S'il est accepte, le modele d'architecture du
  systeme est automatiquement modifie et remodele. Lorsque les mesures de
  performance modelees sont conformes aux conditions commerciales, une
  description detaillee de l'architecture du systeme derivee du modele peut
  etre generee pour des etapes de developpement ulterieures.

Legal Status (Type, Date, Text)
Publication 20020307 A2 Without international search report and to be
                    republished upon receipt of that report.

Main International Patent Class: **G06F-017/00**

Fulltext Availability:
  Detailed Description
Detailed Description
... interconnected hardware and software components, implementing one or
  more business solutions. The architectures of such **systems** are
  typically **required** to
  handle varying degrees of **workload** and priorities under imposed
  business
  constraints.

  The design of system architectures having such requirements and...

 23/5,K/27   (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00790492   **Image available**
WORKLOAD MANAGEMENT IN A COMPUTING ENVIRONMENT
GESTION DE CHARGE DE TRAVAIL DANS UN ENVIRONNEMENT INFORMATIQUE
Patent Applicant/Assignee:
  INTERNATIONAL BUSINESS MACHINES CORPORATION, New Orchard Road, Armonk, NY
     10504, US, US (Residence), US (Nationality)
  IBM UNITED KINGDOM LIMITED, P.O. Box 41, North Harbour, Portsmouth,
     Hampshire PO6 3AU, GB, GB (Residence), GB (Nationality), (Designated
     only for: MC)
Inventor(s):
  KUBALA Jeffrey, 10 Morgan Lane, Poughkeepsie, NY 12570, US,
  NICK Jeffrey, 1957 Route 9W, West Park, NY 12493, US,
  YOCOM Peter, 17B Wildwood, Wappingers Falls, NY 12590, US,
  EILERT Catherine, 34 Sherwood Heights Drive, Wappingers Falls, NY 12590,
     US,
Legal Representative:
  DAVIES Simon Robert (agent), IBM United Kingdom Limited, Intellectual
     Property Law, Hursley Park, Winchester, Hampshire SO21 2JN, GB,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200123974 A2 20010405 (WO 0123974)
  Application: WO 2000GB3720 20000928 (PCT/WO GB0003720)
  Priority Application: US 99408470 19990928; US 99407212 19990928; US
     99407391 19990928
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ
  DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
  LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
  SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: **G06F**
Publication Language: English
Filing Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 15079

English Abstract
  The allocation of shareable resources of a computing environment is
  dynamically adjusted to balance the workload of that environment.
  Workload is managed across two or more partitions of a plurality of
  partitions of the computing environment, which are preferably configured
  as groups of partitions. At least one group of the computing environment
  includes a plurality of partitions of the computing environment.
  Shareable resources are assigned to the partitions of the group and are
  managed as a group. The managing includes dynamically adjusting
  allocation of a shareable resource of at least one partition of the two
  or more partitions in order to balance workload goals of the two or more
  partitions. One example of this is managing central processing unit (CPU)

resources within a comput● environment. When the allocat● of CPU
resources to a partition ●r the computing environment is to be adjusted,
the allocation is adjusted dynamically. The adjusting includes modifying
processor weights associated with the partitions.

French Abstract
  L'affectation de ressources partageables dans un environnement
  informatique est reglee dynamiquement de facon a equilibrer la charge de
  cet environnement. Ladite charge est geree par au moins deux partitions
  d'une pluralite de partitions de l'environnement informatique,
  configurees de preference en groupes de partitions. Au moins un groupe de
  l'environnement informatique comprend une pluralite de partitions de
  l'environnement informatique. Les ressources partageables sont affectees
  aux partitions de ce groupe et sont gerees en groupe. La gestion consiste
  a regler dynamiquement l'affectation d'une ressource partageable d'au
  moins une partition parmi les partitions, de facon a equilibrer les
  objectifs de charge de travail desdites partitions. La gestion des
  ressources d'une unite centrale de traitement (UC) dans un environnement
  informatique est un exemple de cette gestion. Lorsque l'affectation des
  ressources UC a une partition d'un environnement informatique doit etre
  reglee, cette affectation est reglee dynamiquement. Le reglage consiste a
  modifier les poids des processeurs associes aux partitions.

Legal Status (Type, Date, Text)
Publication 20010405 A2 Without international search report and to be
                        republished upon receipt of that report.
Examination 20010621 Request for preliminary examination prior to end of
                        19th month from priority date

Main International Patent Class: **G06F**
Fulltext Availability:
  Detailed Description

Detailed Description
... important workload. This allows CPU resources to be
  dynamically moved to the needed partitions, as **workload   requirements**
  change.

  The present invention further provides **computer   programs** for
  implementing the above methods. Such computer programs generally comprise
  instructions executable by a machine...

  23/5,K/28   (Item 9 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00762396   **Image available**
ADAPTIVE AND SCALABLE SERVER CONTROL
COMMANDE DE SERVEUR ADAPTATIVE ET EVOLUTIVE
Patent Applicant/Assignee:
  SYCAMORE NETWORKS INC, 150 Apollo Drive, Chelmsford, MA 01824-0986, US,
    US (Residence), US (Nationality)
Inventor(s):
  CHAN Dickson K T, 2 Jack Rabbit Lane, Westford, MA 01886, US,
Legal Representative:
  SCHURGIN Stanley M (et al) (agent), Weingarten, Schurgin, Gagnebin &
    Hayes LLP, Ten Post Office Square, Boston, MA 02109, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200075802 A1 20001214 (WO 0075802)
  Application: WO 2000US11786 20000502 (PCT/WO US0011786)
  Priority Application: US 99137354 19990603; US 99419521 19991018
Designated States: AU BR CA CN IN JP KR
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: **G06F-015/173**
Publication Language: English
Filing Language: English
Fulltext Availability:

Detailed Description
Claims
Fulltext Word Count: 7856

English Abstract
A system for server control, including an administration server process
(28) which monitors the performance of a number of server instances, and
which is responsive to a minimum service level which the system must be
able to meet in order to accept a request for service from a client
system (18). The minimum level of service is referred to as a Quality of
Service (QoS). The server instances include a Network Management Server
(NMS) (51) of which the administration server is a part. The QoS of the
NMS (51) is referred to as the QoNMS. QOS or QoNMS may be specified by
the user or the network operator on a per sessions basis, as indicated by
a network operator. When the system accepts a request for service, it may
instantiate an additional server instance to provide service to the
requesting user.

French Abstract
Cette invention se rapporte a un systeme de commande de serveur, qui
utilise un processus serveur d'administration (28) qui surveille la
performance d'un certain nombre d'instances de serveur (12) et qui reagit
a un niveau de service minimum que le systeme doit etre capable de
satisfaire afin d'accepter une requete de service de la part d'un systeme
client (18). Le niveau de service minimum est appele qualite de service
(QOS). Parmi les instances serveur (12), on trouve un serveur de gestion
de reseau (NMS) (51), dont le serveur d'administration fait partie. La
qualite de service (QOS) du serveur NMS (51) est appelee QOSNMS. La
qualite QOS ou le serveur NMS peuvent etre specifies par l'utilisateur ou
par l'operateur reseau a chaque session, tels qu'indiques par un
operateur reseau. Lorsque le systeme accepte une requete de service, il
peut individualiser (instancier) une instance de serveur additionnelle,
pour fournir le service a l'utilisateur qui en a fait la requete.

Detailed Description
... as its "scalability".

  Users often desire to grow system capacity over time, as
  their business **needs** expand. However, existing **systems** frequently
  do not provide users with the ability to manage the scalability of
  their systems in an efficient and convenient fashion. Some
  existing **systems** attempt to determine the resources required for a
  existing **systems** attempt to determine the resources **required** for a
  specific **workload** based on software simulations. Simulation based
  approaches to capacity prediction have significant drawbacks.

  Most fundamentally...

...certain software
  can execute on certain hardware platforms. This approach fails to
  recognize that growing **workload** **requirements** generally result, at
  some point, in the system reaching its capacity limit. Existing
  systems have...

...In particular, network operators must often

spend many hours attempt⬤ to estimate what resources ar⬤
 required for the network management **system** (NMS) itself. Such
estimates are often inaccurate due to unforeseen run-time factors
that have...

...performance. Accordingly,
 trial and error has been necessary in many cases to determine the
 actual **system** resources **required** to provide an acceptable level of
 capacity within the NMS itself.

 For these reasons, it...

 23/5,K/34   (Item 15 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00559157   **Image available**
ACCEPTABILITY TESTING FOR CAPACITY PLANNING OF A DATA STORAGE SYSTEM
ESSAI D'ACCEPTABILITE EN VUE DE LA PLANIFICATION DE LA CAPACITE D'UN
     SYSTEME DE STOCKAGE DE DONNEES
Patent Applicant/Assignee:
 HEWLETT-PACKARD COMPANY,
Inventor(s):
 BOROWSKY Elizabeth Lynn,
 GOLDING Richard,
 MERCHANT Arif,
 SPASOJEVIC Mirjana,
 WILKES John,
Patent and Priority Information (Country, Number, Date):
 Patent: WO 200022530 A1 20000420 (WO 0022530)
 Application: WO 99US23804 19991013 (PCT/WO US9923804)
 Priority Application: US 98172114 19981013; US 99379204 19990821
Designated States: JP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: **G06F-011/34**
Publication Language: English
Fulltext Availability:
 Detailed Description
 Claims
Fulltext Word Count: 5214

English Abstract
 Data storage devices of an enterprise system are tested to determine
 whether the enterprise system is optimally configured. Each data storage
 device is tested to determine whether it can satisfy a performance
 requirement for an assigned group of n workloads. A group of n
 inequalities are generated, and only up to n of the inequalities may be
 evaluated to determine whether the **device** satisfies the performance
 requirement for the assigned group of **workloads** . The inequalities are
 based on a phased, correlated model of I/O activity.

French Abstract
  On effectue des essais sur des organes de stockage de donnees d'un
 systeme d'entreprise afin de determiner si ce dernier est configure de
 facon optimale. On procede a des essais sur chaque organe de stockage de
 donnees afin de determiner s'il satisfait aux exigences de performance
 pour un groupe donne de n charges de travail. On produit un groupe de n
 inegalites et on n'evalue au maximum que n inegalites afin de determiner
 si l'organe satisfait aux exigences de performance pour le groupe donne
 de charges de travail. Les inegalites sont etablies sur la base d'un
 modele phase et correle de l'activite d'entree/sortie.

Main International Patent Class: **G06F-011/34**
Fulltext Availability:
 Detailed Description
 Claims

English Abstract

...and only up to n of t⬤inequalities may be evaluated t⬤determine whether the **device** satisfies the performance **requirement** for the assigned group of **workloads** . The inequalities are based on a phased, correlated model of I/O activity.

Detailed Description
... performance requirement is satisfied by a data storage device that is assigned a group of **workloads** . At least one performance **requirement**

model for each **workload** in the group is assigned. Each model is an increasing function of request rate. The...is used to evaluate at least one model in the
group to determine whether the **device** satisfies the performance **requirement** .
Other aspects and advantages of the present invention will become apparent from the following detailed...

...guarantees. Only as many as n tests are performed to
determine whether the data storage **device** 12 satisfies the performance **requirements** for the given group of n **workloads** S1 to Sn.

A performance **requirement** R(-) based on 1/0 request rate is deemed satisfied if
R(kj(t) ...monitoring and
evaluating the enterprise system 310. During initial configuration, information 1 5 such as **workload** specifications 402, business **needs** 404, and storage-**device**
specifications 406 are provided to a configuration engine 414. This information may be stored in...

...310.

The workload specifications 402 may be determined by performing an informed assessment of the **workload** **requirements** for the enterprise **system**
310. Such an assessment might include predictions of current **workload** **requirements** and growth trends in **workloads** . A workload prediction might be
based on loads generated by a predetermined number of users in existing computer systems. These predictions may be made by knowledgeable **system** designers.

The business **needs** 404 might include **system** attributes that are desired by a customer or client. Such attributes might include transaction - 13...

Claim
... the configuration, satisfies a performance requirement, the second means
- 19 determining at least one performance **requirement** model for each **workload** in
each group, each model being an increasing function of request rate, the request rate...

...third means for evaluating at least one model of each group to determine whether each **device** as configured satisfies its performance **requirement** .

11 The apparatus of claim 1 0, further comprising fourth means for supplying the distribution...

...whether each device satisfied its performance requirement.

13 Apparatus for determining whether a data storage **device** satisfies a performance **requirement** for an assigned group of **workloads** , the
apparatus comprising:
a processor; and

DIALOG(R)File 348:EUROPEAN PATENTS

01411592
**Method of distributing a spare time of CPU and system for performing the
    method**
**Verfahren zum Verteilen von der Reservezeit der CPU und System um dieses
    Verfahren auszufuhren**
**Procede pour distribuer le temps de reserve du CPU et systeme pour mettre
    en oeuvre ce procede**
PATENT ASSIGNEE:
  NEC CORPORATION, (236690), 7-1, Shiba 5-chome, Minato-ku, Tokyo, (JP),
    (Applicant designated States: all)
INVENTOR:
  Nagato, Masaki, c/o NEC Corporation, 7-1, Shiba 5-chome, Minato-ku, Tokyo
    , (JP)
LEGAL REPRESENTATIVE:
  Glawe, Delfs, Moll & Partner (100692), Patentanwalte Postfach 26 01 62,
    80058 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 1193595 A2 020403 (Basic)
APPLICATION (CC, No, Date):   EP 2001121840 010911;
PRIORITY (CC, No, Date): JP 2000275116 000911
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: **G06F-009/50**

ABSTRACT EP 1193595 A2
    A CPU time distribution system includes a plurality of terminals used
  by resource buyers, a plurality of computers used by resource suppliers,
  and a managing server which connected to the terminals and the computers
  via a network. The managing server receives from the terminal, a **request**
   for an unused CPU processing **time** of the computers of the resource
  supplier. The request includes an identifier, for example a name, of a
  program which the resource buyer **requires** executing on the **computer** .
  The **server** further receives from the computers, a response for the
  request by the terminals. Then the server sends the program to the
  computer, when the computer sends a notification of an application for
  the request. The program is executed on the computer and the executing
  results of the program are sent to the terminal of the requesting
  resource buyer in exchange for a payment.
ABSTRACT WORD COUNT: 146
NOTE:
  Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application: 020403 A2 Published application without search report
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
      CLAIMS A (English)   200214   1496
      SPEC A   (English)   200214   7408
Total word count - document A   8904
Total word count - document B   0
Total word count - documents A + B   8904

INTERNATIONAL PATENT CLASS: **G06F-009/50**

...ABSTRACT terminals and the computers via a network. The managing server
  receives from the terminal, a **request** for an unused CPU processing
  time of the computers of the resource supplier. The request includes an
  identifier, for example a name, of a **program** which the resource buyer
  requires executing on the **computer** . The **server** further receives from
  the computers, a response for the request by the terminals. Then the...

01313654
A transaction processing system
System fur die Verarbeitung von Transaktionen
Systeme de traitement de transactions
PATENT ASSIGNEE:
  GE Capital Bilfinans AB, (3244260), Box 1544, 171 29 Solna, (SE),
    (Applicant designated States: all)
INVENTOR:
  Norlin, Klas, C/o Petersson, Tranebergsvagen 38, 167 44 Bromma, (SE)
  Soderman, Per, Flygaregatan 15, 761 42 Norrtalje, (SE)
  Edstrom, Lise-Lott, Villa Solliden, 186 97 Brottby, (SE)
LEGAL REPRESENTATIVE:
  Goode, Ian Roy (31097), GE LONDON PATENT OPERATION, Essex House, 12/13
    Essex Street, London WC2R 3AA, (GB)
PATENT (CC, No, Kind, Date): EP 1122677 A2 010808 (Basic)
                                     EP 1122677 A3 010822
APPLICATION (CC, No, Date):   EP 2001300948 010202;
PRIORITY (CC, No, Date): GB 2499 000203
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: **G06F-017/60**

ABSTRACT EP 1122677 A3
    A transaction processing system (1) allows users to interact using Web
  browsers (2) with Web servers and **Application   servers** (ASs). The Web
  servers have connection **clients** (CC) and resident controller
  configuration and administrator **programs** for handling transaction
  requests. Each connection client (CC) routes a request to a connection
  processor (CP) in an application server (AS). The connection processor
  (CP) dynamically generates a HTML page for transmission to the connection
  client (CC). This is performed with use of data servers (DSs) in the
  application server. This structure is modular and flexible and handles
  transaction   requests with a good response **time** .
ABSTRACT WORD COUNT: 100
NOTE:
  Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application: 010808 A2 Published application without search report
 Search Report: 010822 A3 Separate publication of the search report
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200132	289
SPEC A	(English)	200132	11194
Total word count - document A			11483
Total word count - document B			0
Total word count - documents A + B			11483

INTERNATIONAL PATENT CLASS: **G06F-017/60**

...ABSTRACT processing system (1) allows users to interact using Web
  browsers (2) with Web servers and **Application   servers** (ASs). The Web
  servers have connection **clients** (CC) and resident controller
  configuration and administrator **programs** for handling transaction
  requests. Each connection client (CC) routes a request to a connection
  processor...

...data servers (DSs) in the application server. This structure is modular
  and flexible and handles **transaction   requests** with a good response
  time .

28/5,K/11   (Item 11 from file: 348)

00495621
Method for facilitating the configuration of programs.
Verfahren zur Erleichterung der Konfiguration von Programmen.
Procede pour faciliter la configuration des programmes.
PATENT ASSIGNEE:
  International Business Machines Corporation, (200120), Old Orchard Road,
    Armonk, N.Y. 10504, (US), (applicant designated states: DE;FR;GB)
INVENTOR:
  Lemble, Philippe, 77 avenue du Groupe Morgan, F-06700 Saint Laurent du
    Var, (FR)
  Menanteau, Guy, Azur Marine, 98 bis Avenue de la Corniche Fleurie,
    F-06200 Nice, (FR)
  Pacchiano, Stephan, Soleillette, 173 rue Bondil - Le Brusc, F-83140 Six
    Fours les Plages, (FR)
  Sagols, Germain, Residence Le Park Villa 1, 73 Chemin des Collettes,
    F-06800 Cagnes-sur-Mer, (FR)
  Truchi, Alain, Les Plans de la Colline, Boulevard Louis Roux, F-06700
    Saint Laurent du Var, (FR)
LEGAL REPRESENTATIVE:
  Lattard, Nicole (16571), Compagnie IBM France Departement de Propriete
    Intellectuelle, F-06610 La Gaude, (FR)
PATENT (CC, No, Kind, Date): EP 541875 A1 930519 (Basic)
APPLICATION (CC, No, Date):   EP 91480169 911115;
PRIORITY (CC, No, Date): EP 91480169 911115
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **G06F-009/44**
CITED REFERENCES (EP A):
  PROCEEDINGS OF THE IEEE 1988 NATIONAL AEROSPACE AND ELECTRONICS
    CONFERENCE, NAECON 1988 vol. 2/4, 23 May 1988, DAYTON, US pages 600 -
    607; K. NIX: 'CHANGE AND CONFIGURATION CONTROL IN ADA ENVIRONMENTS: THE
    "STONEMAN" PERSPECTIVE REVISITED'
  AT & T TECHNICAL JOURNAL. vol. 67, no. 4, July 1988, NEW YORK, US pages
    59 - 70; S. CICHINSKI ET AL.: 'PRODUCT ADMINISTRATION THROUGH SABLE AND
    NMAKE'
  IBM TECHNICAL DISCLOSURE BULLETIN. vol. 32, no. 3B, August 1989, NEW
    YORK, US pages 50 - 56; 'MULTIPLE MAINTENANCE LIBRARY SUPPORT SYSTEM'
  CONFERENCE ON SOFTWARE TOOLS 15 April 1985, NEW YORK, NY, US pages 100 -
    103; A. LOBBA: 'AUTOMATED CONFIGURATION MANAGEMENT';

ABSTRACT EP 541875 A1
    A method implemented by a data processing system 10 accessible to users
through **workstations** for facilitating the operation of **configuring** a
program comprising a plurality of functions made of a plurality of parts
(modules).
    An administration table is built in response to data entered by a user
at a workstation. The table comprises the correspondence between each
function of a program and a user assigned to said function. A request
table is built in response to requests for creating or modifying
specified functions, said **requests** originating from users and said
second table comprising for each **request** , a request number, a
description of the requested work, the function assignee retrieved from
the first table. Then, a message is sent to any function assignee
corresponding to a **request** stored in the **second** table, said message
comprising the **request** number, the description of the requested work to
inform the function assignee. A reason table is built in response to
users starting the work requested per a selected request, said third
table comprising for each request number, a status set to a first value
(USER) when a user is making the work, to a second value when the work is
completed, and to a third value when the function is integrated in a
program configuration. By reading the reason table in response to a
command from a user indicative that a configuration is to be started, a
report of the status of the requests is prepared which helps the program
administrator to prepare a new configuration of a program. (see image in
original document)
ABSTRACT WORD COUNT: 262

LEGAL STATUS (Type, Pub Date, Kind, Text):
  Application: 930519 A1 Published application (A1with Search Report
                             ;A2without Search Report)
  Examination: 931110 A1 Date of filing of request for examination:
                             930918
  Withdrawal: 960828 A1 Date on which the European patent application
                             was withdrawn: 960704
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
      CLAIMS A (English)   EPABF1   887
      SPEC A   (English)   EPABF1   3949
Total word count - document A   4836
Total word count - document B   0
Total word count - documents A + B   4836

INTERNATIONAL PATENT CLASS: **G06F-009/44**

...ABSTRACT A1
   A method implemented by a data processing system 10 accessible to users
through **workstations** for facilitating the operation of **configuring** a
program comprising a plurality of functions made of a plurality of parts
(modules).
   An administration table...

...request table is built in response to requests for creating or modifying
specified functions, said **requests** originating from users and said
second table comprising for each **request** , a request number, a
description of the requested work, the function assignee retrieved from
the first table. Then, a message is sent to any function assignee
corresponding to a **request** stored in the **second** table, said message
comprising the **request** number, the description of the requested work to
inform the function assignee. A reason table...

 28/5,K/12   (Item 12 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00484621
A database management system
Datenbankverwaltungssystem
Systeme de gestion de bases de donnees
PATENT ASSIGNEE:
  KABUSHIKI KAISHA TOSHIBA, (213130), 72, Horikawa-cho, Saiwai-ku,
    Kawasaki-shi, Kanagawa-ken 210, (JP), (applicant designated states:
    DE;FR;GB)
INVENTOR:
  Kakimoto, Mitsuru, c/o Intellectual Prop. Div., Toshiba Corporation,
    1-1-1 Shibaura, Minato-ku, Tokyo, (JP)
LEGAL REPRESENTATIVE:
  BATCHELLOR, KIRK & CO. (100991), 2 Pear Tree Court Farringdon Road,
    London EC1R 0DS, (GB)
PATENT (CC, No, Kind, Date): EP 462751 A2 911227 (Basic)
                             EP 462751 A3 930811
                             EP 462751 B1 971229
APPLICATION (CC, No, Date):   EP 91305318 910612;
PRIORITY (CC, No, Date): JP 90157492 900618
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: **G06F-017/30**
CITED REFERENCES (EP A):
  PATENT ABSTRACTS OF JAPAN vol. 8, no. 159 (P-289)24 July 1984
  IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATION vol. 7, no. 3, April
    1989, NEW YORK US pages 354 - 363 JING-FEI REN ET AL. 'An Analysis of
    the Effect on Multiversions on the Performance of Timestamp Algorithms'
    ;

ABSTRACT EP 462751 A2

A database management system comprises a plurality of sites having a computer, a database and a clock. The plurality of sites are interconnectad by a communication line. The database stores a plurality of data for processing. When a transaction request is generated in a site, the transaction management section of the **computer** in the site examines which **database** includes **necessary** data for executing the transaction. Maximum delay decision section determines maximum delay to send an instruction to the site having the database examined. Locktime decision section determines locktime according to the maxmum delay determined and the current **time** of the clock. Then, the **transaction** management section sends the locktime as a lock instruction to the site having the database examined through the communication line. A scheduler section receives the lock instruction sent by the transaction managemant section. A lock activation section activates the scheduler section when the locktime coincides with the current time of the clock. The scheduler section locks the necessary data in the database in response to activation by the lock activation section. (see image in original document)
ABSTRACT WORD COUNT: 182

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9712W3	553
CLAIMS B	(German)	9712W3	497
CLAIMS B	(French)	9712W3	689
SPEC B	(English)	9712W3	3420
Total word count – document A			0
Total word count – document B			5159
Total word count – documents A + B			5159

INTERNATIONAL PATENT CLASS: **G06F-017/30**

...ABSTRACT When a transaction request is generated in a site, the transaction management section of the **computer** in the site examines which **database** includes **necessary** data for executing the transaction. Maximum delay decision section determines maximum delay to send an...

...examined. Locktime decision section determines locktime according to the maxmum delay determined and the current **time** of the clock. Then, the **transaction** management section sends the locktime as a lock instruction to the site having the database...

28/5,K/16   (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00863454   **Image available**
EMBEDDED DIAGNOSTIC SYSTEM AND METHOD
SYSTEME ET PROCEDE DE DIAGNOSTIC INTEGRE

Patent Applicant/Assignee:
   ROCKWELL TECHNOLOGIES LLC, Mail Code A15, P.O. Box 1085, Newbury Park, CA
      91358-0085, US, US (Residence), US (Nationality)
Inventor(s):
   PROVAN Gregory, 3946 Greenwood Street, Newbury Park, CA 91320-5222, US,
   DARWICHE Adnan, 919 Levering Avenue #206, Los Angeles, CA 90024, US,
Legal Representative:
   HEYBL Jaye G (et al) (agent), Koppel & Jacobs, 555 St. Charles Drive,
      Suite 107, Thousand Oaks, CA 91360, US,
Patent and Priority Information (Country, Number, Date):
   Patent: WO 200197031 A2 20011220 (WO 0197031)
   Application: WO 2001US19211 20010614 (PCT/WO US0119211)
   Priority Application: US 2000594648 20000615
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU
   CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
   KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
   SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
   (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
   (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
   (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
   (EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: **G06F-011/00**
Publication Language: English
Filing Language: English
Fulltext Availability:
   Detailed Description
   Claims
Fulltext Word Count: 5942

English Abstract
   An embedded real time diagnostic system that is applicable to fault
   detection and isolation in host systems having repetitive subsystems. A
   query directed acyclic graph (Q-DAG) (57) for one of each type of
   repetitive subsystem is compiled off-line from a causal network model and
   is stored in host system computer memory. When a fault in the host system
   is detected by the **computer** (98), a replicating **program** replicates
   the **necessary** subsystem Q-DAGs (57) to construct an overall host system
   Q-DAG. A data table (60) which contains information on how the various
   Q-DAGs (57) are linked based on the hardware architecture of the host
   system, is also accessed by the computer (98). The data table (60)
   contains a matrix which dictates which Q-DAGs (57) are linked, and Q-DAG
   level information on the Q-DAG nodes and which nodes ar elinked to nodes
   in other Q-DAGs. The new diagnostic system **uses** less memory and
   processor throughput while still providing full system diagnostics.

French Abstract
   La presente invention concerne un systeme de diagnostic en temps reel
   integre pouvant etre applique a la detection et a l'isolement des
   defaillances dans les systemes hotes comportant des sous-systemes
   repetitifs. On procede a la compilation hors ligne, a partir d'un modele
   de reseau causal, d'un graphe acyclique d'interrogation (Q-DAG) (57) pour
   chaque type de sous-systeme repetitif, que l'on stocke dans la memoire
   informatique du systeme hote. Lorsque l'ordinateur (98) detecte une
   defaillance, un programme de duplication duplique les Q-DAG (57) de
   sous-systeme necessaires afin de construire un Q-DAG de sous-systeme
   global. L'ordinateur (98) accede egalement a une table de donnees (60)
   contenant des informations sur la maniere dont les differents Q-DAG (57)
   sont relies en fonction de l'architecture materielle du systeme hote. La
   table de donnees precitee (60) contient une matrice qui indique quels
   sont les Q-DAG (57) relies, et des informations de niveau Q-DAG relatives
   aux noeuds des Q-DAG et aux noeuds qui sont relies a des noeuds dans
   d'autres Q-DAG. Le nouveau systeme de diagnostic de l'invention permet
   d'economiser la memoire et le debit du processeur tout en offrant un
   diagnostic de systeme complet.

Legal Status (Type, Date, Text)
Publication 20011220 A2 Without international search report and to be
                      republished upon receipt of that report.

Main International Patent Class: **G06F-011/00**

English Abstract
    ...host system computer memory. When a fault in the host system is
    detected by the **computer** (98), a replicating **program** replicates the
    necessary subsystem Q-DAGs (57) to construct an overall host system
    Q-DAG. A data table...

    ...and which nodes ar elinked to nodes in other Q-DAGs. The new diagnostic
    system **uses** less memory and **processor** throughput while still
    providing full system diagnostics.

 28/5,K/33   (Item 18 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00574714   **Image available**
HARDWARE/SOFTWARE CODESIGN SYSTEM
SYSTEME A CONCEPTION MIXTE MATERIEL/LOGICIEL
Patent Applicant/Assignee:
  DASH TECHNOLOGIES LIMITED,
  SAUL Jonathan Martin,
  AUBURY Matthew Philip,
Inventor(s):
  SAUL Jonathan Martin,
  AUBURY Matthew Philip,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200038087 A1 20000629 (WO 0038087)
  Application: WO 99GB4338 19991221 (PCT/WO GB9904338)
  Priority Application: GB 9828381 19981222
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK
  DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
  LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ
  TM TR TT TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM
  AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL
  PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
Main International Patent Class: **G06F-017/50**
Publication Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 13369

English Abstract
  A hardware/software codesign system for making an electronic circuit
  which includes both dedicated hardware and software controlled resources.
  The codesign system receives a behavioural description of the target
  electronic system and automatically partitions the **required**
  functionality between **hardware** and **software** , while being able to vary
  the parameters (e.g. size or power) of the hardware and/or software.
  Thus, for instance, the hardware and the processor for the software can
  be formed on an FPGA, each being no bigger than is necessary to perform
  the desired functions. The codesign system outputs a description of the
  required processor (which can be in the form of a net list for placement
  on the FPGA), machine code to **run** on the **processor** , and a net list or
  register transfer level description of the necessary hardware. It is
  possible for the user to write some parts of the description of the
  target system at register transfer level to give closer control over the
  operation of the target system, and the **user** can specify theprocessor
  or **processors** to be **used** , and can change, for instance, the
  partitioner, compilers or speed estimators used in the codesign system.
  The automatic partitioning may be performed by using a genetic algorithm
  which estimates the performance of randomly generated different
  partitions and selects an optimal one of them.

French Abstract

L'invention concerne un ⬤teme a conception mixte materi⬤logiciel
permettant de realiser un circuit electronique qui comprend a la fois des
ressources specifiques commandees par materiel et des ressources
specifiques commandees par logiciel. Ce systeme a conception mixte recoit
une description comportementale de la part du systeme electronique cible
et repartit automatiquement les fonctions necessaires entre le materiel
et le logiciel tout en etant capable de modifier les parametres (p. ex.
dimension ou puissance) du materiel et/ou du logiciel. Ainsi le materiel
et le processeur pour le logiciel peuvent par exemple etre formes sur un
prediffuse programmable, chacun ne depassant pas la taille requise pour
realiser les fonctions desirees. Le systeme a conception mixte sort une
description du processeur requis (sous forme de liste d'interconnexions
pour la disposition sur le prediffuse programmable), un code
d'instructions fonctionnant sur le processeur, et une liste
d'interconnexions ou une description a base d'instructions de transfert
registre a registre du materiel necessaire. L'utilisateur peut ecrire
certaines parties de la description du systeme cible de transfert
registre a registre ce qui lui permet de mieux controler les operations
du systeme cible et il peut indiquer le ou les processeur(s) devant etre
utilise(s) et peut modifier par exemple le repartiteur, les compilateurs
ou les estimateurs de vitesse utilises dans le systeme a conception
mixte. La repartition automatique peut etre realisee au moyen d'un
algorithme genetique qui estime la performance des differentes
repartition generees de maniere aleatoire, et selectionne une repartition
optimale parmi ces dernieres.

Main International Patent Class: **G06F-017/50**

English Abstract
...codesign system receives a behavioural description of the target
electronic system and automatically partitions the **required**
functionality between **hardware** and **software** , while being able to vary
the parameters (e.g. size or power) of the hardware...

...in the form of a net list for placement on the FPGA), machine code to
run on the **processor** , and a net list or register transfer level
description of the necessary hardware. It is...
...transfer level to give closer control over the operation of the target
system, and the **user** can specify theprocessor or **processors** to be
used , and can change, for instance, the partitioner, compilers or speed
estimators used in the codesign...

 34/5/1   (Item 1 from f⬤ 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

00107837
Partitionable multiprocessing systems.
Aufteilbare Multiprozessorsysteme.
Systemes de multiprocesseurs fractionnables.
PATENT ASSIGNEE:
  UNISYS CORPORATION, (842796), Township Line and Union Meeting Roads, Blue
    Bell Pennsylvania 19424, (US), (applicant designated states:
    CH;DE;FR;GB;IT;LI;NL;SE)
INVENTOR:
  Quernemoen, John Michael , 1590 Long Lake Road, New Brighton Minnesota
    55112, (US)
  Voltz, Timothy Robert, 215 East Viking Drive, St. Paul Minnesota 55117,
    (US)
  Campbell, Richard Paul, 11437 Quincy Street N.E., Blaine Minnesota 55434,
    (US)
  Kriscunas, Joseph Gerard, 11524 Monroe, Blaine Minnesota 55434, (US
LEGAL REPRESENTATIVE:
  Orchard, Oliver John (34501), JOHN ORCHARD & CO. Staple Inn Buildings
    North High Holborn, London WC1V 7PZ, (GB)
PATENT (CC, No, Kind, Date): EP 99244 A2 840125 (Basic)
                              EP 99244 A3 870304
                              EP 99244 B1 901024
APPLICATION (CC, No, Date):   EP 83303963 830707;
PRIORITY (CC, No, Date): US 395936 820707
DESIGNATED STATES: CH; DE; FR; GB; IT; LI; NL; SE
INTERNATIONAL PATENT CLASS: G06F-015/16; G06F-009/46;
CITED PATENTS (EP A): US 3812469 A; US 3832695 A; US 3641505 A; US 3253262
  A

ABSTRACT EP 99244 A2
    Partitionable multiprocessing systems.
    A multiprocessing system is partitionable into different applications
under software control. The sub-systems of the system are permanently
interconnected physically, and a sub-system access unit is provided to
enable and disable the sub-system interconnections according to the
configuration required. The sub-system access unit includes an interface
(410) receiving partitioning requests from command sources which are
passed over a channel (412), together with an identification of the
command source, to address a cabling information table stored in the
sub-system access unit, and this provides an identification of the
input/output processor of the application concerned. The sub-system
access unit processor then checks whether the command source is one that
has been assigned to that application, and if not rejects the request. If
the source identities match, the request is further checked against
stored partitioning information to determine whether the change can be
made, and if so, the necessary signals for enabling and disabling the
interconnections are generated. If not, a signal causing the request to
be rejected is generated.
    The stored information may include a signal indicating that a
peripheral sub-system addressed through a shared peripheral interface is
reserved to the exclusive use of a particular application, so that a
partitioning change requesting access to that sub-system will be
rejected.
ABSTRACT WORD COUNT: 213

Set   Items   Description
S1   20094   (SIZING OR SIZE OR SIZES)(5N)(SERVER? ? OR WEBSERVER? ? OR
                 DATABASE? ? OR DBMS OR RDBMS)
S2   185437   (REQUIR? OR NEEDS OR NECESS? OR DEMAND? ? OR CONFIGUR?)(3N-
)(SERVER? OR WEBSERVER? OR APPLICATION? OR PROGRAM? ? OR SOFT-
                 WARE OR DATABASE? OR DBMS OR RDBMS)(3N)(HARDWARE OR CLIENT? ?
                 OR PC? ? OR COMPUTER? ? OR WORKSTATION? ?)
S3   55117   (REQUIR? OR NEEDS OR NECESS? OR DEMAND? ? OR CONFIGUR?)(3N-
)(SERVER? OR WEBSERVER? OR APPLICATION? OR PROGRAM? ? OR SOFT-
                 WARE OR DATABASE? OR DBMS OR RDBMS)(3N)(TERMINAL? ? OR DEVICE?
                 ? OR EQUIPMENT OR MACHINE? ? OR OPERATING)
S4   490290   (WORKLOAD? ? OR WORK()LOAD? ? OR PROCESSING OR PERFORMANCE
                 OR CAPACITY)(5N)(REQUIR??? OR REQUIREMENT? ? OR NEEDS OR NECE-
                 SSARY OR NECESSIT???? OR DEMAND? ?)
S5   1324349 (TYPE? ? OR KIND? ? OR SORT? ? OR FAMILY OR CATEGORY OR CL-
                 ASS OR BRAND? ? OR VARIET??? OR GROUP? ?)(5N)(SERVER? ? OR WE-
                 BSERVER? ? OR APPLICATION? ? OR PROGRAM? ? OR SOFTWARE? ? OR -

```
           DATABASE? ? OR ●●MS OR RDBMS)
S6    306527    (PROCESSOR? OR MICROPROCESSOR? OR PROCESSING()UNIT OR CPU -
                OR MPU)(5N)(UTILIZ? OR UTILIS? OR USE? ? OR ACTIVE OR BUSY OR
                WORKING OR OPERAT??? OR OPERATION? ? OR FUNCTION? ? OR FUNCTI-
                ONING OR RUN???? OR ACTIVE OR ACTIVIT???)
S7     15235    (PROCESSOR? OR MICROPROCESSOR? OR PROCESSING()UNIT OR CPU -
                OR MPU)(5N)(IDLE? ? OR IDLING OR INACTIV? OR INOPERA? OR REST?
                OR WAIT? OR LATENC??? OR LATENT)
S8    934374    (TRANSACTION? ? OR ACTIVIT??? OR PROCESSES OR ACTION? ? OR
                EVENT? ? OR JOB? ? OR TASK? ? OR REQUEST? ? OR QUERY OR QUERI-
                ES)(5N)(RATE OR SPEED OR TIME OR SECOND? ? OR MINUTE? ?) OR T-
                PS
S9     16242    CAPACITY()PLANNING
S10   595046    BENCHMARK? ? OR METRIC? ?
S11      377    S1(S)S4
S12     5567    (WORKLOAD? ? OR WORK()LOAD? ?)(5N)(REQUIR??? OR REQUIREMEN-
                T? ? OR NEEDS OR NECESSARY OR NECESSIT???? OR DEMAND? ?)
S13       15    S1(S)S12
S14      624    SIZING(5N)(SERVER? ? OR WEBSERVER? ? OR DATABASE? ? OR DBMS
                OR RDBMS)
S15       28    S4(S)S14
S16       15    RD (unique items)
S17       58    S9(S)S12
S18       50    RD (unique items)
S19        4    (S1 OR S9)(S)S5(S)S6:S7(S)S8
S20       69    S14(S)S5:S8
S21       43    RD (unique items)
S22       38    S21 NOT PY=2001:2002
S23      818    S2:S3(S)S4(S)S5:S8
S24       86    S2:S3(S)S12
S25       55    RD (unique items)
S26       10    S2:S3(S)S5(S)S6:S7(S)S8
S27        9    RD (unique items)
```

02249509   SUPPLIER NUMBER: 53354298   (THIS IS THE FULL TEXT)
**Canadian firm at top of anthill.(Silicon Graphics Inc. (SGI))(Product
  Information)**
Brooks, Andrew
Computing Canada, 15(1)
Dec 7, 1998
ISSN: 0319-0161   LANGUAGE: English   RECORD TYPE: Fulltext
WORD COUNT: 888   LINE COUNT: 00075

TEXT:
       SGI turns to Platform Computing's workload management standard for
distributed computing
       Bad "bug" jokes aside, supercomputers and ants may have more in common
than meets the eye. High-performance computer manufacturer Silicon Graphics
Inc. (SGI) and the makers of the animated feature ANTZ have both turned to
a workload management tool developed in Canada to get "virtual
supercomputer" performance from distributed systems.
       The tool is the Load Sharing Facility (LSF) suite, a product of
Platform Computing Corp., which opened its new international headquarters
in Markham, Ont. early in last month.
       LSF is designed to access and share the computing resources of
distributed Windows NT and UNIX environments. In addition to workload
sharing, LSF includes job scheduling and workload analysis management.
       "Computing technology people are beginning to use more horsepower,"
says Brad Casemore, Platform's industry marketing manager. "It makes sense
to look at solutions which help maintain peak (use) so you can use your
processing resources more efficiently and get more productivity out of the
people who are trying to get their jobs done faster."
       Load sharing technology is designed to share distributed computing
resources transparently among a large number of users, in effect turning a
server cluster or a computer farm into what appears from the user's desktop
to be a single supercomputer or mainframe. LSF contains a workload
scheduling element which is guided by policies on resource availability,
job execution calendaring and, if **necessary** , external events. It also
analyzes **workload** data to support **capacity   planning** strategies, and
monitors and administers computing resources online. It works in Windows NT
and UNIX environments, and in environments that are a mix of the two.
       Last month SGI announced an agreement in principle with Platform to
adopt LSF as the workload management standard for SGI platforms. One thing
that makes the deal remarkable is that LSF will replace SGI's own workload
management product, Network Queuing Environment (NQE). NQE was initially
designed for Cray Research Inc.'s supercomputers. SGI optimized the
software for its own boxes after it bought Cray in 1996.
       Up to now, LSF and NQE were prime contenders in the workload
management market, waging a seesaw struggle over functionality and
customers.
       NQE was a worthy enough contender, but according to Peter Rigsbee,
SGI's marketing manager, Strategic Software Organization, based in Eagan,
Minn., the battle was in danger of drawing the company away from its core
hardware business.
       "We're seeing more customers going to clustering," he says. "This is
one area where LSF is quite a bit ahead of NQE. We said 'Should we put a
lot of investment into NQE to catch up with Platform or can we take
advantage of what they've done?'"
       Many SGI customers were already using LSF anyway, as its wider range
of hardware vendor support made it an easier fit for heterogeneous
computing environments. (Few SGI customers use SGI equipment exclusively,
Rigsbee says.)
       Companies such as Compaq, Hewlett-Packard, Hitachi, NEC and Sony
bundle, distribute or co-market LSF to their own customers.
       "It's extremely robust," says Casemore. "That's exactly what
(customers) have had on the mainframe: whatever you say about it, it has
been reliable. That's been one of the things that has discouraged them from
moving some applications to a distributed model."

As Rigsbee says, if a SGI customer is running a series of IRIX servers, a user can submit a job through LSF by saying they'd like to run on one of them. NQE could do this too, but Rigsbee says LSF is better at checking workloads, and matching computing resources to user requirements.

For the animated feature ANTZ, LSF was used by Pacific Data Images (PDI), a Palo Alto, Calif.-based animation studio hired by the DreamWorks studio of Glendale, Calif., to do animation production.

ANTZ was PDI's first full-length feature, and the volume of rendering required was well beyond anything the company had ever done before.

PDI was forced to implement a "render farm," increasing the number of its dedicated rendering computers from a few dozen to several hundred.

"We wanted to treat our network computing resources as one large compute engine," said Mark Kirk, technical director for systems at PDI.

"An animator should be able to easily submit jobs to a queue, not caring about where the renders actually run. We needed to insulate the animators from the details."

Workload sharing is especially useful in digital content creation, where massive amounts of graphics information are manipulated. However, the technology is increasingly applied in other areas. LSF has customers in the financial, oil and gas, manufacturing, R&D and high-tech sectors, among others.

U.S. pharmaceutical giant Pfizer Inc. uses workload sharing for an automated document conversion and distribution system that generates drug approval applications for submission to the U.S. Food and Drug Administration.

Also last month, Platform announced that it was donating $52,000 worth of LSF site licences to two Canadian medical research facilities.

The Toronto labs, one at Mount Sinai Hospital and the other at the Hospital for Sick Children, are involved in the Human Genome Project, a huge, worldwide effort to unlock the secrets of human DNA.

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COMPANY NAMES: Platform Computing Corp.--Products; Silicon Graphics Inc.
 --Equipment and supplies
GEOGRAPHIC CODES/NAMES: 1CANA Canada; 1USA United States
DESCRIPTORS: Product description/specification; Network software
EVENT CODES/NAMES: 330 Product information
PRODUCT/INDUSTRY NAMES: 7372620 (Network Software)
SIC CODES: 7372 Prepackaged software
TICKER SYMBOLS: SGI
TRADE NAMES: Load Sharing Facility (Network software)--Usage
FILE SEGMENT: CD File 275

18/9/4   (Item 4 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01852422   SUPPLIER NUMBER: 17603043   (THIS IS THE FULL TEXT)
Capacity management for client/server architectures.
Domanski, Bernard
Enterprise Systems Journal, v10, n9, p30(7)
Sep, 1995
ISSN: 1053-6566   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 3415   LINE COUNT: 00301

ABSTRACT: The use of client/server architectures has grown tremendously over the past few years. However, many planned systems are not yet in place because of **capacity planning** and resource management issues. Capacity management requires applying a number of different analytical techniques, including statistical forecasting, simulation and benchmarking. A thorough capacity management analysis will determine what hardware and software will be **required** to support a given **workload** . The process, then, first **requires** the analyst to identify the composition of the workload, and through historical data, to predict the anticipated workload. A simulation model is then used to play out the anticipated workload to determine whether the desired level of service can be met. This is where what-if analysis can be done to determine where to change configurations to obtain

the most optimal system for the desired workload.
TEXT:

The past several years have seen the proliferation and use of client/server architectures within corporate America. According to the Gartner Group, nearly 60 percent of surveyed organizations expressed an interest in moving to client/server architectures for mission-critical applications. Yet today, less than 10 percent of those organizations actually have these newly architected mission-critical applications in place, and many people wonder why so few.

Simply stated, capacity planning and resource management of these systems have given rise to a new set of questions that traditional capacity planners are not fully equipped to answer. These questions include the following.

* What type of servers should be deployed?
* How many servers are needed?
* How big should the servers be to handle the application volume?

How can you tell if the servers are optimized for the network operating system and communications software that is in place?

Are applications properly configured for a mixed-platform environment?

Are appropriate measurement sources available?

Are appropriate capacity planning tools/techniques available?

Can traditional resource management functions (e.g., backup, security, etc.) be easily accomplished for a potential architecture under consideration?

The purpose of this article is simple: explore the components/techniques used in capacity management and highlight their strengths and weaknesses in client/server environments. The article first reviews the background and market perspective of resource management. Next, it reviews the capacity planning process:

* Define workload characterization
* Survey users for upcoming resource requirements
* Forecast workload levels.

Key parts of the capacity planning process not explored here include:

* Modeling potential new configurations
* Generating reports for management.

The intent is to increase your awareness of the planning issues that must be faced.

Background And Market Perspective

If the emergence of the PC marked the emergence of client/server computing, then you might say history began on January 1, 1980 --the default current date when starting a PC without an internal clock. At that time, resource management was practiced on S/370-type mainframes. Not only did IBM have performance and capacity tools, but a small industry emerged as well with tools and techniques that helped simplify management of these complex systems. Companies were producing measurement, analysis and reporting tools to extend the performance facilities already in MVS.

Historical measurement repositories began to emerge in the early 1980s. MXG (Merrill Consultants, Dallas, TX) and MICS (Morino Associates, Vienna, VA) allowed diverse measurement sources to be captured in a single logical location and, using SAS (SAS Institute, Inc., Cary, NC), allowed comprehensive reporting systems to be written. Entire chargeback and accounting applications began to emerge, driven by data captured in historical repositories. Capacity planning studies moved from paper and pencil analysis to the use of queuing models, driven by actual production data.

While the 1980s saw mainframe capacity techniques become more sophisticated, the cost of hardware steadily dropped. Companies such as DEC, Sun and Hewlett Packard (HP) advanced the use of UNIX-like operating systems at this time. Thus, as the 1990s arrived, the cost per MIPS for "small" machines became very appealing to the corporate world. No longer was the need for more capacity solved by adding more resources to the mainframe. Large applications were beginning to be reengineered to take advantage of the potential cost savings these smaller machines could provide. The world was changing -- but would the mainframe be left behind? No, but the mainframe would become surrounded by these smaller machines, all of which would work together to become a client/server architecture.

People and organizations work slowly, however. Client/server was not a revolutionary process but an evolutionary one. Mission-critical

applications had to be deployed on stable, maintainable and easily expandable platforms. Capacity planners began to ask important questions, beginning with: Do standards exist? For without standards, it would be difficult to add peripherals or even software when needed.

In the mainframe-only world, IBM developed the standard for operating systems years ago; this has been supported by S/390-compatible vendors. In the network area, however, no one vendor owns the standard. TCP/IP, for example, was originated by Sun Microsystems (Mountain View, CA) but donated to the public domain and subsequently enhanced by hundreds of people. UNIX, while designed and originally developed by Bell Labs, had its source code sold to thousands of universities worldwide, leading to Berkeley UNIX vs. AT&T UNIX. As each new midsize hardware manufacturer needed an operating system, yet another slight variant of UNIX was produced. In short, many UNIX versions exist today all similar, yet all different. While there are efforts underway to standardize these UNIX versions, they are still far from a single unifying release.

Another frightening threat posed by client/server architectures is the lack of a single coherent systems management infrastructure. Mainframe functions that are all but forgotten become enormous in a distributed environment that is running mission-critical applications -- backup and recovery, security, software distribution, etc.

The changing world now must include the network as a key component of systems management. The key here is that if the network does not have the appropriate bandwidth, it will be the source of poor performance rather than the source being a CPU or a disk drive as in the past.

Finally, with the proliferation of GUI environments on many smaller platforms, it becomes possible to "reinvigorate" old applications. By merely converting character-based 3270 screens to point-and-click GUIs, old applications are given a new life--often without changing any of the true application logic on the mainframe. Thus, the decisions capacity planners must make become even more complex.

* What GUI platform should be deployed? OS/2, Windows, Motif, etc.
* What underlying hardware/operating system platform should be used? Sun/Solaris, HP/UX, Windows NT, 80x86/Netware, AIX, etc.

The environment could start to look like Figure 1, which implies that, again, the network is a critical component to both capacity and performance as well as reliability.

The Capacity Management Process

Understanding the process implies first identifying the components of the process, as shown in Figure 2. The capacity management process itself consists of applying several different techniques.

* Rules-O/'Thumb (ROTs) These reflect accumulated knowledge and wisdom regarding commonly observed relationships. ROTs are simple, well-known observations (such as Murphy's Law) that have obvious application to performance evaluation for example, blocksizes for tape and disk data sets should never be less than 4K. ROTs are excellent for day-to-day operations but are not much help in predicting hardware and software upgrade requirements. They are useful ill estimating limits but limited when used to represent complex interrelationships such as the impact of upgrading a CPU. They are most useful when they are system-specific (e.g., MVS-only) and are often used with other modeling techniques.

Statistical Forecasting Statistical forecasting offers a more organized approach than ROTs. Forecasting is usually applied to workload volume (e.g., number of transactions per day) and utilization. It requires measuring and tracking items such as CPU, disk and channel utilizations, as well as workload volumes. It uses historical trends to predict future trends and call be used to examine subtle variations in data types of trends, seasonality and significance.

Forecasting also provides confidence in results. Statistical forecasting is not good for predicting performance for a workload on alternate configurations, nor is it useful for "what-if" analysis. For emerging applications (those under development), utilizations and workload volumes are often estimated. Unfortunately, these estimates are all too often made without enough information and, therefore, introduce inaccuracies. In addition, statistical forecasting offers little to the analyst charged with determining response time at some point in the future.

Simulation - Simulation has been a popular form of performance evaluation for some time. It allows analysts to model the system at a much

greater level of detail tha●s practical with queuing model●
Historically, simulation models have been difficult to construct and often
require large amounts of time to validate and execute.

Benchmarking. Benchmarking is probably the oldest performance
evaluation technique historically applied when evaluating new hardware
alternatives. Simply stated, you collect a representative sample of your
workloads, run it on the proposed machine and evaluate performance using
the measurements collected. Though it sounds simple, each of these steps is
often timeconsuming and difficult.

Queuing Modeling Models based on queuing theory use mathematical
formulas that express relationships between workloads and performance
measures. Queuing models can represent very complex environments at a
single instant in time; because of this, they can, at best, approximate
performance.

The process of capacity management results in answering the
fundamental question: What hardware/software environment is needed to
support a given workload(s) at a prescribed volume while ensuring that
service-level objectives (e.g., response time, turnaround time) are being
met? (see Figure 3). Often, ROTs are first used as an initial guess to this
question.

The process, therefore, is straight-forward.

* First, identify the composition of the mission-critical workload
(workload characterization). Sometimes, a mission-critical application is
built first, thus presenting a difficult system sizing problem because of
the lack of any measurement data.

Second, using historical data feeding statistical forecasting, predict
the anticipated workload volume (i.e., number of transactions) at different
points in time in the future. Alternatively, business forecasts are used to
drive these analyses.

Third, drive a queuing or simulation model with the anticipated
workload at the volumes resulting from forecasting to determine if
service-level objectives can be met. If so, great; if not, use "what-if"
analysis with the queuing model to change configurations so service levels
can, in fact, be met.

Configuration changes can imply changing processors, memory size and
type, number and type of disks in the I/O subsystem, paging/swapping
configuration, operating system release levels and network parameters.
Fourth, summarize the analyses using a management reporting system so
different audiences can view capacity information of specific interest to
them.

Workload Characterization

Workload characterization is the process of examining all of the
executing entities (programs, processes, tasks, applications, etc.) on a
system and classifying these into a small number of sets. For example,
while there might be thousands of transactions that execute on a system in
a given day, they may be classified (characterized) into a handful of sets
(workloads) based on the type of application being performed (functional
characterization). That is, all of the payroll transactions would tall into
one workload, all of the accounts receivable transactions would fall into
another, etc.

At times, work is characterized by resource consumption (resource
characterization) rather than by similar function. For example, all
transactions using a small amount of CPU time and doing a small number of
I/Os fall into one class while those transactions using a high amount of
CPU time and doing a large number of' I/Os would fall into a different
class. The objective is to reduce the potentially large number of
executables into a much smaller summarized set that is not so unruly for
statistical analysis and modeling.

Resource characterization has been closely examined and applied to
traditional mainframe environments (TSO, batch, IMS, CICS). The predominant
analysis technique applied is known as cluster analysis. Cluster analysis
forms different groups of jobs or transactions based on similar resource
consumptions. For example, jobs that do an extraordinary amount of I/O
might fall into one cluster while jobs executing a very small amount of I/O
might be grouped into another.

To perform any type of workload characterization, the key step is
obtaining a set of performance metrics. Especially in the case of resource
characterization, a rich measurement source collected during an active

period of execution should contain enough information to characterize the environment. While in the System 370/390 world there are rich measurement sources (e.g., SMF, RMF), this is not necessarily true in a client/server environment. First, consider the operating system. If an application deploys Windows or Windows for Workgroups, there currently are no measurements at all. Only if Windows NT is deployed are there any metrics and those, on close examination, are not nearly as rich as their counterparts in SMF and RMF.

The UNIX operating system does, in fact, have available metrics. However, those metrics, in sources like iostat, vm-stat and sar, leave you wanting more. In "Measuring UNIX Systems" (ESJ, April 1994), Chuck Hopf analyzed these three measurement sources and discussed the problems with the data from these sources. He also examined Performance Collection Software (PCS), the commercially available product from HP that runs not only on HP hardware but also on Sun machines and (soon) under AIX on the IBM RS/6000. While PCS is significantly richer than other UNIX measurement sources, the mere fact that it is a commercial product implies that it may not be available at all locations as it is not the industry standard. In fact, no industry standard set of metrics currently exists for UNIX-based systems. Currently, the Performance Management Working Group (PMWG) within the Computer Measurement Group (CMG) and several interested parties from the X/Open standards organization are examining this problem.

Continue to assume that the difficult task of obtaining client/server measurements can be overcome. What measurements should be used for client/server workload characterization? Clearly, the traditional measurements of CPU consumption -- I/O and memory should be used on both clients and servers. This should be supplemented, however, with information addressing locality metrics where the running process executed and where the data that is accessed is located.

The advantage of adding locality metrics is in defining workloads that take advantage of the client/server architecture. Ira transaction is running on a particular server and has access to its required data on that server, network access is not required. Ideally, transactions in a missioncritical application should be designed to minimize network access because that, in turn, will minimize response time by eliminating the network. You should also consider the problem of process and data dependencies. Because transactions in client/server environments often visit many servers before completion, there may be a dependency as to which workloads must complete first in order to be synched with other executing workloads.

A client/server example involving the measurements can show what characterizes the use of a distributed systems file server. Assuming it is UNIX-based, the example first defines a file system request as any NFS file request: create, gettatr, mkdir. rmdir, read, write. etc. Statistically, there are several relevant factors to consider with file requests.

* Request Frequency Distribution omits infrequently occurring requests and concentrates on those requests that account for most of the activity.

* Request Interarrival Distribution depends on network speed; to build a model, you will need to know an arrival rate of the different types of requests. This becomes even more important if simulation is being used. It also depends on client speed; again, to build a model, you will need to know how quickly requests can be generated from the clients.

* File Referencing Behavior is how file service requests are distributed among the files in the file system; this helps identify potential system bottlenecks later on. Accesses tend to concentrate on a small subset of files rather than be scattered to all files. Typically, 90 percent of files are sequentially accessed.

Distribution of the Sizes of Read and Write Requests concerns the number of bytes requested by read and write requests. Often, there are many small (<500 byte) requests; sometimes there are many requests in a small range, Transaction Level is where file requests are actually SQL requests to a SQL server. The more complex, the fewer requests of lower complexity are sent to the server.

While techniques such as cluster analysis can still be applied, do not lose focus on the capacity questions that workload characterization must address for these environments.

* What workloads run at each node?

* What hardware is needed to maintain service due to workload growth?

* How many more users ● each existing server support? ●
* If the number of transactions increases by n percent, what will the
server utilizations become?

Surveying The User Community

Workload surveys, while not performed the same way in all
organizations, usually form the beginning of a workload forecasting effort.
In essence, historical data of workload volumes (i.e., the number of
transactions completed on a given day, week, etc.) is gathered and
analyzed. The objective is to determine the number of transactions (by the
different types) that will be submitted at times in the future. From that
estimate, a performance model is built to analyze different physical
hardware configurations to ensure that service levels (i.e., response
times) are being met.

For surveys, consider the case of receiving workload volume estimates
from application managers. While they may be interested in seeing their
history of submitted work to be processed, they are often focusing on the
impact of implementing new functionality into existing or new transactions.
Why new functionality? The business probably required the functionality to
increase revenue. Thus, if more revenue is produced, it likely comes from
an increase in the sale of natural business units. So if the CFO has
anticipated n percent more widgets (widgets being the natural business
unit) will be sold next year, this may translate into an increase in the
number and type of transactions submitted.

This use of natural business units is not isolated to the
client/server world; on the contrary, the concept has been in use for
legacy systems for quite some time. Thus, surveys become problems of
translation: n percent more widgets implies a percent more transaction X, b
percent more transaction Y, etc. Thus, for client/server capacity planning,
use whatever mapping mechanism was in place for your legacy systems to
generate workload volume estimates.

Those organizations that are implementing significant new
functionality in applications may be satisfied to generate workload
estimates by statistically analyzing historical trend information and
generating workload forecasts. Understanding workload forecasting for
client/server systems does not require any new insight over understanding
workload forecasting for traditional legacy systems. The problem is
essentially the same: to find the trends exhibited in historical data.

The challenge you face as capacity planners is straightforward. First,
you must obtain historical workload volume measurements. A rule of thumb
for forecasting is if you want to forecast n weeks/months/years into the
future, you should collect n weeks/months/years worth of historical data.
As previously pointed out, a robust set of metrics for analysis may not
necessarily exist. Assuming you can get around this, you next must identify
a forecasting tool to use. Happily, this problem is also not isolated to
the client/server world. Thus, nearly any of the commercially available
statistical tools you would have used on legacy systems could be used to
analyze client/server data. Ideally, what is needed is a forecasting tool
that could analyze historical data for linear as well as nonlinear trends,
tell which trend is the best fit and identify the upper and lower levels of
confidence for the forecast.

Thus, forecasting does not present any new problems. The statistical
techniques apply equally for client/server as well as legacy environments.
Again, do not lose sight of the critical questions forecasting can address
with the aid of modeling, given multiple mission-critical workloads.
* What server do I place which workload on?
* Which workloads can be mixed on servers?
* Which workloads cannot be mixed on servers?

What's Next?

You must continue enumerating traditional capacity planning tasks
beginning with modeling techniques -- particularly focusing on the
strengths and weaknesses of analytic modeling vs. simulation for
client/server environments. You also must explore the client/server
implications on management reporting. If you can identify exactly who the
user community has listened to (and perhaps still is), you will better
understand how some hardware and software decisions have been made
erroneously. Finally, you should highlight some of the most common system
management issues that always must be taken into account before making the
final client/server acquisition decision.

ABOUT THE AUTHOR
     Bernard Domanski, Ph.D., is an authority in workload analysis,
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303-1500.
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 SPECIAL FEATURES: illustration; chart
 DESCRIPTORS: Technology Information; Technology Overview; Client/Server
  Architecture
 FILE SEGMENT: CD File 275

 18/9/5   (Item 5 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01782613   SUPPLIER NUMBER: 16627192   (THIS IS THE FULL TEXT)
Capacity planning for C S. (client server) (DB Expo in New York City)
Computer Conference Analysis Newsletter, n355, p9(1)
Dec 20, 1994
ISSN: 1071-2216   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT
WORD COUNT: 715   LINE COUNT: 00062

TEXT:
     The speaker was Jim Tyson, Senior Analyst, Synectics for Management
Decisions, Inc.
     It is mathematically impossible to do accurate capacity planning."
But, there is a methodology that will help you.
     "I don't want to give it a name or an acronym. It really has to do
with common sense!"
     "Client/Server has to do with saving money and providing flexibility.
Over time, the net costs of client/server will drop below those for legacy
systems."
     You need capacity planning because of the high costs to upgrade and
the high costs associated with a failure to plan. "The traditional ways to
do| capacity planning don't work with client/server|." His advice: Don't
let the vendor do the planning for you and don't rely on "winging it --
that's dangerous!" (Sounds like darn good advice! As he said, it's common
sense!)
     With a client/server system, in order to do capacity planning, you
must first do a location analysis -- what piece of equipment does what,
where, and when. Then you must determine the needed capacity -- what,
where, and when. There are commercial products available for capacity
planning. He listed some. "They deal mainly with the network." "The prices
range up to $50,000." "I won't rely on any one of them!"
     "There are commercial methodologies, too." He named Ernst & Young,
Arthur Andersen, and others. "They are expensive and usually require paying
for consultants, too." "And then there are the home-brew methodologies."
With them, you can scale the effort to the need and control the costs. But,
they do require a thorough commitment and resources. And don't forget the
importance of complete documentation -- "build a library and maintain it."
     Doing **capacity planning** requires both technical skills and
managerial skills. You must develop meaningful metrics for **workloads** ,
systems capabilities, and projected **needs** .
     "Don't just look at the best-case. Look at peak loads and what you
have to do if something goes wrong." You must measure:
     response time
     - optimal, nominal, and peak load
     - in clock seconds
     throughput
     - peak and average
     - in volume/time
     network overhead

- latency, aggregate throughput, protocol overhead, device overhead,
contention, etc.
     - "There will be noise, collisions, etc."
     storage
     - type (disk, tape, optical)
     - speed (access time and data transfer rate)
     - capacity
     - "This is the easiest part -- it's somewhat straight forward."
     computational
     - MIPS, MHz, benchmarks
     - "This isn't going to be a cornerstone of your planning because it
doesn't tell you much."
     - Only use these metrics for comparisons.
     other metrics
     - flexibility, scalability, ease-of-use, initial costs, operational
costs, etc.
     "There is so much that can be adjusted or tweaked at each point!" His
point: This stuff is complex!
     To gather these metrics, you must find the right sources of
information. He suggested talking to:
     the developers
     the end-users
     the system staff
     - "They are usually already doing performance analysis."
     management
     Don't forget to take into account the existing plans for the system,
budgets, imposed standards, etc. And then there are the outside sources:
     vendor's literature
     published articles
     references
     - Don't just use those provided by the vendor.
     They may not be completely objective. Find your own.
     published benchmarks
     user groups
     "Do your own benchmarks and live tests and talk to somebody who has
the thing running."
     CAN COMMENT: His points are well taken. Capacity planning is much more
difficult in a client/server environment than in a mainframe shop. It's
also much more important because things are more flexible -- they can
change more easily and more quickly. Each piece of equipment added to the
system increases the complexity not only of the system, but also adds to
the complexity of doing capacity planning.
     "There is no magic!" You must:
     identify the users and the applications
     project the raw workload
     establish the communications system overhead
     estimate the server workload
     assess the general hardware and software capabilities
     develop a server configuration
     "The servers are the important elements|."
     "Remember: If the system designers do a bad design, they are going to
get bad performance!"
     His advice -- his promised methodology -- is to concentrate on the
important issues and ignore the other factors.
     "Reduce the complexity of doing the planning." But always remember
that "capacity planning is an integral part of systems management."
          COPYRIGHT 1994 Guidelines

 DESCRIPTORS: DB-Expo; Client Server Architecture; Capacity Management
 FILE SEGMENT: CD File 275

 18/9/18   (Item 1 from file: 47)
 DIALOG(R)File 47:Gale Group Magazine DB(TM)
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 04724283   SUPPLIER NUMBER: 19205703   (THIS IS THE FULL TEXT)
 Back to our roots.(Capacity planning tools are becoming a necessity.)

ABSTRACT: Monitor performance on an ongoing basis to take advantage of the
scalability and relative low cost of PC-based systems. **Capacity - planning**
 tools have been used for quite some time in the mainframe environment and
now they are a necessity for Windows NT. Systems breakdowns can be avoided
with the use a well thought out capacity modeling tool. The process
involves several steps, the first being to define the equipment
configuration.Next, define the types of **workloads** your system carries.
Each **workload   demands** some amount of CPU service, the response time and
utilization rates can be calculated from the number of incoming
transactions per hour. Once your model can correctly predict performance
during low, average and peak usage it can form the basis for modeling
experiments.This should enable you to prevent bottlenecks from clogging
your system.

TEXT:
        RECENTLY, MARILYN KANAS SENT US AN evaluation copy of Zitel's new
NetArchitect. It brought us back to our roots for many reasons. In the
mid-1980s, we developed a capacity-planning tool called ISS-Three. It
included a mainframe-based data collection and reduction tool, as well as a
PC-based modeling and reporting tool. It was used to anticipate
configuration changes needed to respond to changes in workload. Based on an
analytical model (that is, a mathematical one), it was very fast and fairly
accurate. It competed principally with BGS Systems' Best/1.
        Marilyn worked for us back then, and she marketed our product quite
successfully. Ultimately, we sold ISS-Three to UCC, and UCC was, in turn,
acquired by Computer Associates shortly afterward. Marilyn moved on, and
ISS-Three became part of CA-Unicenter.
        Like IS S-Three, NetArchitect is designed to compete with Best/1.
Unlike ISS-Three, it runs on a Windows platform (Windows wasn't invented
back then), and it has knowledge of routers, T-1 lines, and other
communications gear that hadn't yet been invented back then either. It uses
a simulation technique rather than a mathematical model.
        Capacity-planning tools have been used for a long time in mainframe
shops; now they are becoming a necessity as Windows NT scales to the
enterprise and clusters of cheap Intel or Alpha processors replace the
mainframe. Many shops are encountering with some unhappy surprises when a
small increase in workload becomes the proverbial straw that breaks the
networked camel's back. And then surprise No. 2 often awaits the unwary
when the unbudgeted emergency hardware upgrade makes only a negligible
improvement.
        Don't like surprises?
        Use a capacity-modeling tool and you can avoid those problems. A
capacity-modeling exercise involves several steps. First, you need to
define the equipment configuration. In the case of NetArchitect, that can
be done visually, although the process is not nearly as intuitive as using
the Visio drawing tools. Next, you need to define the types of workloads
your system carries, such as batch and on-line transactions of various
sorts. The experienced modelist will group similar types of workloads
together and model only a few categories, such as small, medium, and heavy
on-line transactions, rather than model each and every transaction type.
        Each workload demands some amount of CPU service, some amount of
service from each disk drive, and so on. You need to specify arrival rates
for each of these--that is, the number of incoming transactions per hour.
From these inputs, you can calculate response time and utilization rates,
and (hopefully) verify those against measured data.
        Ah, there's the rub. For a long time, IBM mainframes have collected
System Management Facility (SMF) and Resource Measurement Facility (RMF)
data that report on system utilization and response times. PCs are only now
starting to catch up. Windows NT can collect an impressive array of data
about its operations, which can be viewed with SMS, but good tools are not
yet available to reduce the data so that it's suitable for the capacity

models. Some hand work and experimentation is necessary. And thank God for spreadsheets Once you've verified that your model can correctly predict the performance during low, average, and peak usage periods, the model is said to be robust and can form the basis for modeling experiments. What, for example, would be the benefit of adding more symmetric multiprocessors? What improvement would you get if you went from 10BaseT to 100BaseT for the backbone? What would happen if you changed from Ethernet hubs to Ethernet switches? You can easily vary configurations and arrival rates to predict what configurations will yield acceptable response times at the lowest cost.

The idea is to prevent system bottlenecks or choke points from clogging the speedy flow of transactions through your system. A benefit of modeling is that it can help you deal with the fact that bottlenecks have a tendency to move through the system, so relieving one can immediately expose another. Like a network of streets and highways, congestion anywhere in the system can cause serious delays at multiple points along your route (although computer systems are not known to experience rubbernecking delays).

The big advantage of PC-based systems lies in their smooth scalability, since capacity increases come in relatively small increments (unlike mainframe upgrades, which can easily run to six figures). This fact, coupled with an unrelenting erosion of prices and a seemingly never-ending parade of newer and better products, suggests a just-in-time approach to capacity upgrades. It's also elementary, our Dear Dr. Watsons, that to do so, you need to monitor performance comprehensively on an ongoing basis.

We've been back to our roots lately in other ways, too. As we struggle to connect our kiosks to municipal databases, we've been revisiting issues of mainframe connectivity. Venerable screen-scraping tools like Wall Data's Rumba Office 9S/NT have been updated to work with server-side technology (Wall Data's Arpeggio Live!) and ActiveX. Even more exciting are the direct interfaces (based on LU 6.2) that extend the capabilities of Microsoft's Transaction Server. Code-named Cedar, the demo CD is very compelling. It)ets you establish a direct transactional interface between Microsoft's Transaction Monitor and a CICS-based mainframe while handling the pesky details of two-phase commit for you. Seems like a technology worth watching.

Another interesting new product is COBOL for Windows from Fujitsu. Long a developer of COBOL compilers for mainframes, Fujitsu has come up with a PC-based product that seamlessly integrates COBOL with Windows, ActiveX, and Visual Basic. As the year 2000 looms closer, this product offers a promising bridge from the mainframe to a world of NT-centric enterprise computing.

We end this month's column with a shameless plug for Microsoft's Developer Days, for which we serve as Regional Directors for New York and New Jersey. DevDays, as it's known, is being held simultaneously in more than 70 locations on March 19, 1997, and is expected to attract more than 40,000 people. To register, point your browser at http: //microsoft.com/devdays or telephone 800-206-3000 or 612-550 6390 by March 5, 1997.

18/3,K/1   (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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02269962   SUPPLIER NUMBER: 53877382   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Distributed Capacity Planning, Part 2.(Technology Information)
Domanski, Bernie
Enterprise Systems Journal, 14, 2, 66(1)
Feb, 1999
ISSN: 1053-6566   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 3066   LINE COUNT: 00256

...ABSTRACT: s multi-tiered network architectures differ fundamentally
from mainframe systems and pose new challenges in **capacity   planning** .
Backbone-network sensitivity is a major source of bottlenecks because
network bandwidth and speed are...

...Availabile bandwidth on the public network is very sensitive as well.
Scalability is crucial for **capacity   planning** on distributed systems
because a single processor change can cause multiple rollovers. Capacity
planners should...

...workloads and acceptable service levels. Questions to ask include the
relative importance of each application, **required** availability and
performance, current **workload** volumes, whether existing parameters will
change over time and whether new applications are planned. Management...

18/3,K/2   (Item 2 from file: 275)
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02251032   SUPPLIER NUMBER: 53359721
**Mega Web Sites -- Big Sites Are Becoming The Norm For Companies Doing
   Commerce On The Web-Bringing A New Set Of IT
   Challenges.(Internet/Web/Online Service Information)**
Hibbard, Justin
InformationWeek, 75(1)
Dec 7, 1998
ISSN: 8750-6874   LANGUAGE: English   RECORD TYPE: Abstract

...ABSTRACT: resulting in problems for IT departments as they develop the
large, complex back-end systems **necessary** to handle the **workload** .
Popular Web sites handle more than 100 million page views per day and
online sales...

...limited experience in handling highly integrated Web sites. One of the
keys to success is **capacity   planning** . IT infrastructures capable of
handling 24-hour access are becoming similar in size to full...

18/3,K/3   (Item 3 from file: 275)
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02249509   SUPPLIER NUMBER: 53354298   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Canadian firm at top of anthill.(Silicon Graphics Inc. (SGI))(Product
   Information)**
Brooks, Andrew
Computing Canada, 15(1)
Dec 7, 1998
ISSN: 0319-0161   LANGUAGE: English   RECORD TYPE: Fulltext
WORD COUNT: 888   LINE COUNT: 00075

...   scheduling element which is guided by policies on resource
availability, job execution calendaring and, if **necessary** , external
events. It also analyzes **workload** data to support **capacity   planning**
strategies, and monitors and administers computing resources online. It

works in Windows NT and UNI●.
?t/3,k/4-50

18/3,K/4   (Item 4 from file: 275)
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01852422   SUPPLIER NUMBER: 17603043   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Capacity management for client/server architectures.
Domanski, Bernard
Enterprise Systems Journal, v10, n9, p30(7)
Sep, 1995
ISSN: 1053-6566   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 3415   LINE COUNT: 00301

...ABSTRACT: the past few years. However, many planned systems are not yet
in place because of **capacity   planning** and resource management issues.
Capacity management requires applying a number of different analytical
techniques, including...

...and benchmarking. A thorough capacity management analysis will determine
what hardware and software will be **required** to support a given **workload**
. The process, then, first **requires** the analyst to identify the
composition of the workload, and through historical data, to predict...

18/3,K/5   (Item 5 from file: 275)
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01782613   SUPPLIER NUMBER: 16627192   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Capacity planning for C S. (client server) (DB Expo in New York City)
Computer Conference Analysis Newsletter, n355, p9(1)
Dec 20, 1994
ISSN: 1071-2216   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT
WORD COUNT: 715   LINE COUNT: 00062

...   don't forget the importance of complete documentation -- "build a
library and maintain it."
     Doing **capacity   planning** requires both technical skills and
managerial skills. You must develop meaningful metrics for **workloads** ,
systems capabilities, and projected **needs** .
     "Don't just look at the best-case. Look at peak loads and what you...

18/3,K/6   (Item 6 from file: 275)
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01624874   SUPPLIER NUMBER: 14480986   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Benchmarking middleware. (Alternative Technologies' Database Connectivity
   Benchmark)**
Finkelstein, Richard
DBMS, v6, n12, p82(2)
Nov, 1993
ISSN: 1041-5173   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1721   LINE COUNT: 00144

...   DCB documentation, however, warns (correctly, in my opinion) that
benchmark results are highly dependent on **workload** , application
requirements , system design, and implementation, and that the DCB should
not be used as a substitute for critical **capacity   planning** .
     The DCB is u nique among database benchmarks in the amount of
attention it places...

18/3,K/7   (Item 7 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01512619   SUPPLIER NUMBER: 12039954   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Command performance. (problems in analyzing performance data within Unix)
   (Technical)
Mead, Harold
DEC User, p63(1)
March, 1992
DOCUMENT TYPE: Technical   ISSN: 0263-6530   LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 847   LINE COUNT: 00064

ABSTRACT: Some analysts believe that performance measurement and **capacity
   planning** are important for systems administrators planning an expanded
network. Without proper planning, reaching a performance...

...unit, memory capacity, and input/output device usage. That data must
then be applied to **work - load   requirements** and analyzed in meaningful
business terms. Finally, the calibration of a baseline model is required...

18/3,K/8   (Item 8 from file: 275)
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01438488   SUPPLIER NUMBER: 10804528   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Streamlining VMS. (Digital Equipment Corp adds new system management
   capabilities to its proprietary operating system)**
Shannon, Terry
DEC User, p16(3)
March, 1991
ISSN: 0263-6530   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1894   LINE COUNT: 00164

...   the VAX Software Performance Monitor (SPM).
     VPA is a rule-based VMS performance management and **capacity
planning** software package. In its current incarnation, it incorporates an
expert system for VMS performance analysis...

...frequently-accessed disk files, and a performance modelling component
that can be used to project **work - load** growth and system upgrade
requirements . It already includes **capacity   planning** and work-load
projection attributes like those of DECcp, disk analysis capabilities
comparable to those...

18/3,K/9   (Item 9 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01437176   SUPPLIER NUMBER: 10916436   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**The performance road test. (capacity planning with workstations and X
   terminals) (includes related article on cost of capacity planning) (Cover
   Story)**
Coulson, Christopher J.
DEC Professional, v10, n6, p50(6)
June, 1991
DOCUMENT TYPE: Cover Story   ISSN: 0744-9216   LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 4130   LINE COUNT: 00327

...ABSTRACT: also determine where bottlenecks will appear and how to
resolve them. This requires site-related **capacity   planning** . The first
step in **capacity   planning** is to have an idea of what results to expect.
Digital Equipment Corp conducted a...

...can improve performance. Estimating performance and configuration needs
requires knowing the impact of the real **workload** . The number of disks

needs to be maximized and ● I/O load balanced over all spindles to achieve best...
...a diskless environment. Monitoring activities of users, collecting related data and using this information with **capacity planning** tools will result in accurately anticipating computing needs.
...   results of these tests show, the proliferation of workstations and X terminals creates a new **capacity planning** challenge because of the complexities of distributed computing and variable workloads. It is more important...

...carefully and to collect related data. This data can then be used in conjunction with **capacity planning** tools to simulate and prepare for future **workloads** , accurately anticipating computing **needs** . -Christopher J. Coulson is a consultant to the Information Systems Business Group of Digital Equipment Corporation. The Dollars And Cents Of **Capacity Planning**
     Historically, the principal method of capacity planning has been to analyze hardware performance (CPU and...

18/3,K/10   (Item 10 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01400690   SUPPLIER NUMBER: 10731325
Getting the best for your buck. (managing data centers efficiently)(Inside Edge)
Lalor, Thomas Jr.
Computerworld, v25, n19, p76(1)
May 13, 1991
ISSN: 0010-4841   LANGUAGE: ENGLISH   RECORD TYPE: ABSTRACT

...ABSTRACT: efficient. Managers facing budget cuts need to meet ever-increasing service demands with less money. **Capacity planning** involves assessing **work load** and corresponding **needs** , while service-level analysis focuses on reliability and availability. The three options for those seeking...

18/3,K/11   (Item 11 from file: 275)
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01388652   SUPPLIER NUMBER: 09414114   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Performance measures. (computer performance evaluation)
Hinnant, David
UNIX Review, v8, n12, p34(7)
Dec, 1990
ISSN: 0742-3136   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 3836   LINE COUNT: 00319

...   development of specific workloads. To this end, the group is investigating the possibilities for developing **requirements** for specific functional **workloads** (office automation, transaction processing, etc.). The group is also involved in standardizing system activity reporting...

...and other conferences and trade shows. Topics covered in past sessions include RTEs, workload characterization, **capacity planning** , and commercial benchmarks. The group usually meets once a year during the winter UniForum conference...

18/3,K/12   (Item 12 from file: 275)
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01380306   SUPPLIER NUMBER: 08714994   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Why CASE should extend into software performance. (computer-aided software

engineering)
Smith, Connie U.; Williams, Lloyd G.
Software Magazine, v10, n9, p49(8)
July, 1990
ISSN: 0897-8085   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 4601   LINE COUNT: 00394

...   and the tools that support them emerged from the technical areas of
performance evaluation and **capacity   planning** [C.U. Smith, "Evolution of
Software Performance Engineering: A Survey," Proceedings of the Fall Joint
...

...to characterize workloads and calibrate the model to match existing
performance metrics. They examine future **needs** by using forecasts of
future **workload** volumes and resource **requirements** , and study hardware
configurations that will satisfy those needs.
     Initial applications of SPE supplemented capacity...

   18/3,K/13   (Item 13 from file: 275)
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01358948   SUPPLIER NUMBER: 08182258   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**DP to finance: we have to talk. (data processing; includes related article
   'tools help capacity planning')**
Thewlis, David C.
Software Magazine, v10, n1, p47(6)
Jan, 1990
ISSN: 0897-8085   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2595   LINE COUNT: 00212

...   service, but to ensure that the service is distributed according to
the specific system plan.
     Capacity   Planning is the process of ensuring that enough
aggregate service is available to meet current and...

...concept is "as economically as possible." Obviously, most computing can
be sized larger than their **workload   requirements** , and thus guarantee
that they meet their performance goals. But this is not the most...

   18/3,K/14   (Item 14 from file: 275)
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01295854   SUPPLIER NUMBER: 07242494   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**How IBM experience can help VAX planners. (installing capacity planning
   expertise in VAX-VMS MIS shops) (buyers guide)**
Kolence, Kenneth W.
Software Magazine, v9, n5, p49(7)
April, 1989
DOCUMENT TYPE: buyers guide   ISSN: 0897-8085   LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 3169   LINE COUNT: 00257

...   capable of providing the service needed, along with the proper
planning needed to acquire it.
     Capacity   planning involves, at a minimum, classifying and
forecasting the future workloads, identifying the serv ice and/or response
time **requirements** of critical **workload** elements, and determining and/or
designing configurations which will meet these service requirements. This
should...

   18/3,K/15   (Item 15 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01232355   SUPPLIER NUMBER: 06253392
Network demand strains service delivery. (in Performance Management Tools supplement)
Marinstein, Jeff
Computerworld, v22, n9, pS16(1)
Feb 29, 1988
ISSN: 0010-4841   LANGUAGE: ENGLISH   RECORD TYPE: ABSTRACT

...ABSTRACT: to standards. Software performance engineering is recommended
for the improvement of new applications. A formal **capacity   planning**
network study will allow companies to better prepare for greater user
demands and new **work   loads** ; expert systems is a promising technology
in this area. The goal is to have a...

 18/3,K/16   (Item 16 from file: 275)
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01198556   SUPPLIER NUMBER: 05260311
Fourth costs may cancel out savings. (fourth generation languages)
Wardropper, Jill
Computer Weekly, n1063, p1(2)
May 14, 1987
ISSN: 0010-4787   LANGUAGE: ENGLISH   RECORD TYPE: ABSTRACT

...ABSTRACT: computer funds allocations, which will establish an approach
for managing government computing. It recommends "that **capacity   planning**
 (insuring that enough computer resources are available to meet the
required   workload) should be introduced" and that 4GLs be used
especially for new projects.

 18/3,K/17   (Item 17 from file: 275)
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01165927   SUPPLIER NUMBER: 04366203
Planning and management. (Part 1)
Snyders, Jan
Infosystems, v33, n6, p80(1)
June, 1986
ISSN: 0364-5533   LANGUAGE: ENGLISH   RECORD TYPE: ABSTRACT

ABSTRACT: Various software tools can be used for **capacity   planning** and
management. The Mics product from Morino & Assoc will allow the user to
determine the...

...quantifying current capacity on the existing system; also, it will
analyze and quantify the service **needs** of the resources by **work - load**
mix, and then it will locate performance problems.

 18/3,K/18   (Item 1 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)
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04724283   SUPPLIER NUMBER: 19205703   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Back to our roots.(Capacity planning tools are becoming a necessity.) (Technology Information)
Sarna, David E.Y.; Febish, George J.
Datamation, v43, n3, p25(2)
March, 1997
ISSN: 0011-6963   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 1091   LINE COUNT: 00088

...ABSTRACT: basis to take advantage of the scalability and relative low

cost of PC-based systems. ●acity - planning tools have been used for quite some time in the mainframe environment and now they...

...several steps, the first being to define the equipment configuration.Next, define the types of **workloads** your system carries. Each **workload** **demands** some amount of CPU service, the response time and utilization rates can be calculated from...

18/3,K/19   (Item 1 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
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01931030
Tandem adds system analyzer
Computerworld   May 23, 1988   p. 28
ISSN: 0010-4841

     ... a system that analyses a fault-tolerant system's performance information to aid in future **capacity** **planning** and identification of potential problems. The Surveyor analyses specific **work** **loads** to determine the resource **requirements** of tasks. The reports produced by Surveyor, either on demand or at user-specified intervals...

... identify potential problems and the conditions that cause them. The reports can also help in **capacity** **planning** as they track how the system's work load is growing. Surveyor will be available...

18/3,K/20   (Item 2 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
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01873562
Network demand strains service delivery
Computerworld   February 29, 1988   p. S16
ISSN: 0010-4841

     ...range systems and strictly enforce the standards. Firms should avoid proprietary networks. Firms should perform **capacity** **planning** , perhaps by using an expert system, to determine future user **needs** and system **work** **loads** . Using software performance engineering techniques, firms should determine the effect of changes in software on...

18/3,K/21   (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.

10150315   SUPPLIER NUMBER: 20540667   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Understanding the roles of CSM, PDM, and ERP in product development.
   (Component and Supplier Management; Product Data Management; Enterprise
   Resource Planning)(Special Report: Electronic Design Automation)
Althoff, James
Electronic Design, v46, n6, p82(2)
March 9, 1998
ISSN: 0013-4872   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 1241   LINE COUNT: 00104

...   within ERP systems include order entry and purchasing execution, inventory management, master production scheduling, materials **requirements** planning (MRP), and **workload** and **capacity** **planning** .
     Where The Savings Begin
     The pervasiveness of components in finished products means that a CSM
...

18/3,K/22   (Item 2 from file: 148)

09043619   SUPPLIER NUMBER: 18781730   (USE FORMAT 7 OR 9 FOR FULL TEXT)
'Just-in-time' production of large assemblies.
Agrawal, Ashutosh; Harhalakis, G.; Ioannis, Minis; Nagi, Rakesh
IIE Transactions, v28, n8, p653(15)
August, 1996
ISSN: 0740-817X   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 9950   LINE COUNT: 00817

...   the order can be accepted or some changes in the shipping schedule
are required. Traditional **capacity   planning** , which accounts only for
the set-up and run times of operations, may not be...and thus promised
due-dates, because it calculates these data based on the actual production
requirements and the actual **workload** on the shop floor.
     6. Conclusions
     This paper addressed an important practical problem: the scheduling...

   18/3,K/23   (Item 3 from file: 148)

08752690   SUPPLIER NUMBER: 18323245   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Bringing design and procurement together. (product-design engineers;
   purchasing staff)(includes related article)
Palmer, Craig
Mechanical Engineering-CIME, v118, n4, p77(3)
April, 1996
ISSN: 0025-6501   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 2158   LINE COUNT: 00187

...   demand. Typical functions within ERP systems include order entry
and purchasing execution, inventory management, materials- **requirements**
planning, and **workload** and **capacity   planning** . ERP systems generally
are operational and heavily transaction-oriented.
     PDM systems link design and manufacturing...

   18/3,K/24   (Item 4 from file: 148)

06376241   SUPPLIER NUMBER: 13112981   (USE FORMAT 7 OR 9 FOR FULL TEXT)
INSTRUMENTAL ANNOUNCES FIRST ORDERS FOR UNIX PERFORMANCE MONITORING
   SOFTWARE
PR Newswire, 0209MN003
Feb 09, 1993
LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT
WORD COUNT: 563   LINE COUNT: 00047

...   Reagan Moore said, "The statistics we can obtain with PerfStat are
essential for understanding our **workload** 's I/O **requirements** . This will
enable us to do a much better job of I/O **capacity   planning** for our
pending Cray Y-MP C90 installation, which will ensure we get the most...

   18/3,K/25   (Item 1 from file: 553)

02311633   H.W. WILSON RECORD NUMBER: BWBA92061633
Better capacity planning.
Jinks, Daniel W
Information Systems Management (Inf Syst Manage) v. 8 (Fall '91) p. 76-9
LANGUAGE: English

ABSTRACT: Capacity modeling has traditionally been viewed as the critical task in estimating future computing **needs** , but the **work   load** estimates that form a model's underlying assumptions are often unreliable. One method for improving **capacity   planning** is to optimize input and focus on results analysis. Key factors for better **capacity   planning** are improved work load estimates, simplified computer models, and the use of a sensitivity analysis. By fine-tuning the **capacity   planning** process, organizations can gain more accurate capacity forecasts and a more efficient planning process, which will free up information systems staff members for other projects. Guidelines for improving the **capacity planning** process are presented.

18/3,K/26   (Item 1 from file: 88)
DIALOG(R)File   88:Gale Group Business A.R.T.S.

04654291   SUPPLIER NUMBER: 20324310
Analytical performance modeling of hierarchical mass storage systems.
Pentakalos, Odysseas I.; Menasce, Daniel A.; Halem, Milton; Yesha, Yelena
IEEE Transactions on Computers, v46, n10, p1103(16)
Oct, 1997
ISSN: 0018-9340   LANGUAGE: English   RECORD TYPE: Abstract

ABSTRACT: A queuing network model is proposed for hierarchical computer mass storage system **capacity   planning** . Resource **demand** and **workload** intensity parameters for different systems were determined by measuring a Unitree mass storage system and...

18/3,K/27   (Item 2 from file: 88)
DIALOG(R)File   88:Gale Group Business A.R.T.S.

02079721   SUPPLIER NUMBER: 06905511
An empirical study of computer capacity planning in Japan.
Lam, Shui F.
Communications of the ACM, v31, n8, p965(12)
Aug, 1988
ISSN: 0001-0782   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 3336   LINE COUNT: 00320

ABSTRACT: Computer installation managers must be able to analyze current **workloads** , forecast future **demand** , and plan future data processing capacity. Methods of computer **capacity   planning** (CCP) in Japan and the US are compared. The US has more advanced CCP tools...

TEXT:
     AN EMPIRICAL STUDY OF COMPUTER **CAPACITY   PLANNING** IN JAPAN The advance in electronic technology has significant impact on the business community. Computer...

...managers to understand their applications and growth environments sufficiently to analyze the contents of current **workload** , to forecast the future **demand** , and to plan future data processing capacity to meet the needs of the business. Monitoring...

...satisfy the future demand in a cost-effective manner is generally referred to as computer **capacity   planning** (CCP). The term capacity as used in this article refers to the capacity of the...

18/3,K/28   (Item 1 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

02329186 86926393
Optimization of maintenance organization and manpower in process industries

Knapp, Gerald M; Mahajan, M nd
Journal of Quality in Maintenance Engineering v4n3 PP: 168-183 1998
ISSN: 1355-2511 JRNL CODE: QMGR
WORD COUNT: 4982

...TEXT: to be precise. Dijkstra et al. (1991; 1994) developed a decision
support system (DSS) for **capacity planning** of aircraft maintenance
personnel. The DSS is used to guarantee that sufficient engineers with
appropriate...

... organization of the maintenance workforce in the identical and smallest
possible teams to match the **required workload** . This would not be an
efficient use of the resources in many plants. Duffuaa and...

18/3,K/29   **(Item 2 from file: 15)**
DIALOG(R)File   15:ABI/Inform(R)
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01197763 98-47158
Building information bridges
Anonymous
Mechanical Engineering v118n4 PP: 78 Apr 1996
ISSN: 0025-6501 JRNL CODE: MEG
WORD COUNT: 307

...TEXT: demand. Typical functions within ERP systems include order entry
and purchasing execution, inventory management, materials- **requirements**
 planning, and **workload** and **capacity planning** . ERP systems generally
are operational and heavily transaction-oriented,

PDM systems link design and manufacturing...

18/3,K/30   **(Item 3 from file: 15)**
DIALOG(R)File   15:ABI/Inform(R)
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01189418 98-38813
**Client/server capacity planning and hardware resource usage metrics,
trends, and relationships**
Major, Joe
Capacity Management Review v24n2 PP: 3-9 Feb 1996
ISSN: 0091-7206 JRNL CODE: PPR
WORD COUNT: 4620

ABSTRACT: The 5th installment in a series on the uses of quantitative
methods in client/server **capacity planning** , focusing on specific
resource usage metrics, trends, and relationships, is presented.
Reasonability tests that a...

... hardware resource requirements forecasts are addressed. Capacity
planners might have to estimate the hardware resource **requirements** of
future **workloads** under 4 scenarios: 1. same platform as today, with more
work of the current type...

18/3,K/31   **(Item 4 from file: 15)**
DIALOG(R)File   15:ABI/Inform(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

01146067 97-95461
**Client/server capacity planning, part IV - Client/server capacity planning
and software evolution: Software functionality dynamism**
Major, Joe
Capacity Management Review v23n11 PP: 3-6 Nov 1995
ISSN: 0091-7206 JRNL CODE: PPR
WORD COUNT: 1351

...TEXT: It is grafted upon a previous version of the product at a significant performance penalty. **Workload** resource usage growth eventually **requires** parallel implementations. Otherwise, hardware capacity cannot be effectively exploited. **Capacity planning** must include provisions for the exploitation of hardware parallelism. (Editor's note: see the related...

18/3,K/32   (Item 5 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

01134045 97-83439
Client/server and workload characterization
Howard, Phil
Capacity Management Review v23n10 PP: 17-22 Oct 1995
ISSN: 0091-7206 JRNL CODE: PPR
WORD COUNT: 2208

TEXT: In many respects, **capacity planning** in the client/server world is not that much different from the **capacity planning** that we have become quite good at for mainframe systems. The whole idea of workload forecasting and characterization, for example, is very similar. Workload forecasting for client/server does not **require** any particular new insights over **workload** forecasting for traditional legacy systems. Whether mainframe or client/server, the mechanisms used to map...

18/3,K/33   (Item 6 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

01114626 97-64020
Service level management in enterprise systems
Howard, Phil
Capacity Management Review v23n9 PP: 1, 14+ Sep 1995
ISSN: 0091-7206 JRNL CODE: PPR
WORD COUNT: 2731

...TEXT: make sure that all of the participants understand the realities of the current computing environment.

Capacity planning . The **capacity planning** process is needed to make sure that service levels will continue to be met in the future. Specifically, given the **required** service levels and projected future **workloads** , will more capacity be **required** ? Will changes in the business plan translate into changes in IT capacity? Also, if the...

18/3,K/34   (Item 7 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

00854365 95-03757
The capacity management discipline's changing future
Domanski, Bernard
Capacity Management Review v22n4 PP: 6-8 Apr 1994
ISSN: 0091-7206 JRNL CODE: PPR
WORD COUNT: 1829

ABSTRACT: The future of the **capacity planning** (CP) profession is discussed. CP has traditionally consisted of 4 disciplines. As computing technologies evolve...

... understanding what the workloads are as they execute on new platforms, 3. forecasting these new **workloads** so that resource **requirements** can be found, and 4. predicting the performance and service levels end-users

who have...
TEXT: Traditionally, **capacity planning** has consisted of 4 disciplines: finding adequate data sources, workload characterization, workload forecasting, and performance...

... the workloads are as they execute on new platforms (and across platforms), forecasting these new **workloads** so that resource **requirements** can be found, and predicting the performance and service levels end-users who've submitted...

... are defined, expected service levels such as response time are defined as well.

From the **workload** resource **requirements** along with projections as to the quantity of work to be processed, we can use...

... to predict actual service levels for different physical configurations. One of the primary goals of **capacity planning** is to build a capacity plan that defines, for each quantity of workload (volume of transactions) expected into the future, what different physical configuration is **necessary** to handle the **workload** . For example, (as depicted in Figure 1 [figure omitted]) when my existing workload doubles in...

18/3,K/35   (Item 8 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)
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00746973 93-96194
Performance of distributed UNIX systems
Anonymous
Capacity Management Review v21n7 PP: 6-8 Jul 1993
ISSN: 0091-7206 JRNL CODE: PPR
WORD COUNT: 1361

...TEXT: and,

* change the scheduling priorities to improve response time.

CAPACITY PLANNING

Again, the goal for **capacity planning** is much the same as it is for the mainframe, to determine an effective and...

... the desired service level for the anticipated load. The tasks involved are characterization of current **workloads** , projecting growth, forecasting future **needs** , and assessing the impacts of changes. The methodologies will also sound familiar: benchmarking, simulation (rarely...

18/3,K/36   (Item 9 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)
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00733731 93-82952
A comprehensive review of production lot-sizing
Eftekharzadeh, Reza
International Journal of Physical Distribution & Logistics Management v23n1 PP: 30-44 1993
ISSN: 0960-0035 JRNL CODE: IPD
WORD COUNT: 11716

...TEXT: and assemblies as specified by the MRP plan and the master production schedule. These procedures, **capacity planning** using overall factors CCPOF), capacity bills (CB), resource profiles (RP), and capacity requirement planning (CRP... but increased capacity deviations under accurate time standards, reduced planned lead time settings, and lumpy **work loads** . RP also **requires** shorter time periods than CPOF. Under

most conditions the use of ⬤ in combination with...

18/3,K/37   **(Item 10 from file: 15)**
DIALOG(R)File   15:ABI/Inform(R)

00608896 92-23999
Making Capacity Management Work
Anonymous
Capacity Management Review v20n3 PP: 7, 9 Mar 1992
ISSN: 0091-7206 JRNL CODE: PPR
WORD COUNT: 1228

...ABSTRACT: with   other   planning   activities,   such   as   application
development   planning,   network   planning,   and   hardware   acquisition
negotiations. **Capacity   planning** is defined as the process by which a
computer **workload** forecast is transformed into resource **requirements**
that meet information systems (IS) service commitments. Two ways of
assessing the demands on system...

... the current workload and the forecasting of future workloads. Service
levels are another area where **capacity   planning** impacts the rest of the
organization. Service level agreements are negotiated between the data
center...
...TEXT: consultant with Deloitte & Touche, focused on these organizational
interfaces as the key to strengthening the **capacity   planning** function.
Overall, Soder depicted the hierarchy of DP planning functions as shown in
Figure 1. (Figure 1 omitted) Specifically, he defines **capacity   planning**
 as the process by which a computer **workload** forecast is transformed into
resource **requirements** which meet IS service commitments. The major IS
planning issues involve application workload planning (workload...

18/3,K/38   **(Item 11 from file: 15)**
DIALOG(R)File   15:ABI/Inform(R)

00596133 92-11306
Capacity Planning: More than Sizing CPUs
Anonymous
Capacity Management Review v20n1 PP: 7-8 Jan 1992
ISSN: 0091-7206 JRNL CODE: PPR
WORD COUNT: 1501

ABSTRACT: The classical approach to **capacity   planning** usually
incorporates the following steps: 1. Determine current resource loading,
service levels, and the amount...

... in the existing workload. 3. Identify new workloads and estimate
volumes. 4. Estimate the resource **requirements** of new **workloads** . 5.
Predict resultant total resource loading and service levels. 6. Derive
changes in available resources...
...TEXT: requirement," as depicted in Figure 1. (Figure 1 omitted) You will
have to redirect your **capacity   planning** efforts to cope with new
applications; major changes can occur without much planning. Capacity plans
...

... appropriate platform. Actually, this is not inconsistent with steps
three and four of the classical **capacity   planning** approach outlined at
the beginning of this article. It still involves identifying and estimating
the volumes of new **workloads** and estimating resource **requirements** .

In this new environment, you will have to recognize economic issues. For
example, workstation application...

18/3,K/39   **(Item 12 from file: 15)**

00560534 91-34891
Capacity Planning and the Changing IS Environment
Anonymous
Capacity Management Review v19n6 PP: 1-5 Jun 1991
ISSN: 0091-7206 JRNL CODE: PPR
WORD COUNT: 3966

ABSTRACT: **Capacity planning** is an accepted management function in many
large information systems (IS) shops and, in fact...

... and even the strategic direction of the business. One of the most basic
steps in **capacity   planning** is to gain access to an organization's
business plan so that the parts of...

... find the business drivers – those key variables that drive IS resource
consumption. Characterizing and forecasting **workload   requirements** and
translating these into capacity plans are only part of the job. Planners
must also...

 18/3,K/40   (Item 13 from file: 15)

00494304 90-20061
An Assessment of Capacity Management
Wise, Timothy M.
Internal Auditing v5n4 PP: 75-81 Spring 1990
ISSN: 0897-0378 JRNL CODE: IAD

...ABSTRACT: resources and projecting future resource requirements,
consists of 3 elements: service management, performance management, and
 capacity   planning . Service management focuses on providing acceptable
service to users through the identification of service indicators...

... data center to assess current performance and identify and implement
system adjustments to increase performance. **Capacity   planning**
concentrates on determining the resources **required** to process future
 workloads and satisfy service levels. An audit approach for reviewing
capacity management involves reviewing directives and...

 18/3,K/41   (Item 14 from file: 15)

00482929 90-08686
The Interface Between SSADM and Capacity Planning
David, Alun
EDP Performance Review v17n11 PP: 1-5, 8-9 Nov 1989
ISSN: 0091-7206 JRNL CODE: PPR

ABSTRACT: In 1986, the Central Computer and Telecommunications Agency
undertook a study of interfacing **capacity   planning** tools with the
British Government's Structured Systems Analysis and Design Method (SSADM).
The project...

... models, such as one to identify and describe entities within SSADM that
are related to **capacity   planning** and another to establish the entities
comprising the inputs **necessary** to construct **workload** base models for
each **capacity   planning** tool. Researchers concentrated on transaction
processing workloads under ATHENE, an analytical modeling package that
 requires only coarse detail for its **workload** inputs and is simple in
design. The study revealed that SSADM can be interfaced with **capacity**
 planning tools and that such an interface should prove beneficial to

applications development a[...]o system...

18/3,K/42   (Item 15 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

00407951 88-24784
Service Level Management
Vincent, David R.
EDP Performance Review v16n4 PP: 3, 7-8 Apr 1988
ISSN: 0091-7206 JRNL CODE: PPR

...ABSTRACT: response time objectives and end-user acceptance of their responsibility in the forecasting of future **workload   demands** . This will result in business efficiencies and effectiveness brought about by the **capacity   planning** efforts.   ...

18/3,K/43   (Item 16 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

00378847 87-37681
MIS: You Can't Control What You Can't Measure!
Wexler, Steve
ComputerData v12n10 PP: 8-9, 11 Oct 1987
ISSN: 0025-9535 JRNL CODE: CPD

ABSTRACT: Shrinking budgets and increasing **workloads   demand** better management information systems (MIS) **workload** management. **Capacity   planning** and performance monitoring can provide this control. Although a major portion of Canada's IBM Corp. mainframe and plug-compatible community uses computer measuring, the growth in measurement and **capacity   planning** has not kept pace with the growth in hardware and millions of instructions per second...

... computer measurement is becoming more expensive due to higher salaries and more expensive tools. The **capacity   planning** market can be divided into 4 segments: 1. those who neither measure nor plan, 2...

18/3,K/44   (Item 17 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

00343420 87-02254
Capacity Management Update
Anonymous
EDP Performance Review v14n11 PP: 1-9 Nov 1986
ISSN: 0091-7206 JRNL CODE: PPR

...ABSTRACT: Capacity Management Services Ltd. In another session, 2 speakers said that the main goal of **capacity   planning** is to give service to users, which, in turn, supports business **needs** . Topics included: 1. identifying **workloads** , 2. reviewing past patterns and trends in capacity requirements, 3. forecasting, and 4. comparing system ...

18/3,K/45   (Item 18 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

00324997 86-25411
Planning and Management (Part 5)
Snyders, Jan
Infosystems v33n6 (Part 1) PP: 80 Jun 1986

ABSTRACT: Three vendors supplied definitions of **capacity   planning** and management and how each firm's product fits into this category. Mics, a **capacity   planning** system from Morino & Associates, allows users to establish a base line, includes performance management, and...

... based modeling tool and can recommend the least costly alternative to meet the user's **workload   requirements** . Boole & Babbage's CMS/Model 300 creates detailed characterization of an multiple virtual storage environment and analyzes and quantifies the service **requirements** of those resources by **workload** mix. CMS/Model 300 also identifies bottlenecks and enables the user to test specific activities...

18/3,K/46   (Item 19 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

00306926 86-07340
Benefits of Capacity Planning
Garth, Mike
Data Processing v27n10 PP: 9-12 Dec 1985
ISSN: 0011-684X JRNL CODE: DTP

...ABSTRACT: a computer system depends on correct sizing and configuring of equipment. A disciplined approach to **capacity   planning** requires that 5 capabilities must be established at the start: 1. mechanisms for establishing and...

... achieved, 3. a means of predicting future loads, 4. a method of assessing future hardware **needs** , and 5. tracking procedures for **workload** , resource use, and service levels. The use of modeling tools allows the system designers to...

18/3,K/47   (Item 20 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

00263702 85-04135
Methods for Using Information for Capacity Planning
Komajda, R. J.; Kulik, Constance; Sprung, James G.
EDP Performance Review v12n11 PP: 1-7 Nov 1984
ISSN: 0091-7206 JRNL CODE: PPR

...ABSTRACT: planners have a large amount of information on which to draw on for making decisions. **Capacity   planning** is used to evaluate growth in the **demands** of existing **workloads** . **Capacity   planning** is a 5-step process, consisting of: 1. identifying all workloads to be supported by the computer system, 2. profiling resource **demands** and time interdependencies for each **workload** , 3. aggregating the **workloads** , 4. determining aggregate resource **requirements** , and 5. selecting equipment to match the aggregate resource requirements. **Capacity   planning** can also be used to reevaluate the capacity requirements in the planned addition of an...

18/3,K/48   (Item 21 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

00119110 80-13061
Capacity Management and Planning-Part 2
Howard, Philip C.; Carlson, Gary; Christensen, Jim
EDP Performance Review v8n6 PP: 1-7 Jun 1980
ISSN: 0091-7206 JRNL CODE: PPR

ABSTRACT: The **capacity** ●nning process, as seen by Dr. ● eRoy Bronner in a recent issue of the IBM Systems...

... 3. forecasting for both user and data processing, and 4. analysis and reporting. Resource utilization, **workload** characterization, availability, and user service **requirements** are all critical to understanding computer system capacity. The use of measurement tools, reports, and performance data is also a key part of the **capacity planning** process. **Capacity planning** is a cyclic and ongoing process that integrates the following: 1. data processing management, 2...

... s Understanding Your Application and Growth Environment (USAGE) methodology provides an approach to understanding current **workload** and forecasting future **workload requirements** . A recent International Conference on Computer Capacity Management focused on user services, a case study...

18/3,K/49   (Item 22 from file: 15)

A Capacity Planning Methodology
Cooper, J. C.

...ABSTRACT: workload, and to plan future data processing capacity to meet the needs of the business. **Capacity planning** for the central processing unit (CPU) is critical. One methodology for the comparison of CPU capacity and **workload requirements** is called Understanding Your Application and Growth Environment (USAGE). USAGE focuses on the processor resource...

...the future workload on the system. It is a good place to start in the **capacity planning** of an installation since it allows the various business elements to be individually measured and...

18/3,K/50   (Item 23 from file: 15)

Overview of the Capacity Planning Process for Production Data Processing
Bronner, L.

...ABSTRACT: systematic approach for understanding and predicting the capacity of production data processing systems is computer **capacity planning** . **Capacity planning** brings together many of the past performance management ideas and integrates them with current performance ...

...collected to characterize the workload, the software components, and the hardware components, 2. the parameters **required** to forecast future **workloads** and system performance, 3. the parameters required to collect, analyze, and report data items, and...

...should manage his installation on a continuing basis, using data and the results of analysis. **Capacity planning** is more than a data gathering and performance prediction exercise. It is an integration of...
... tools, data collection and reporting, workload characterization, and system modeling and performance prediction. A good **capacity planning** program is important to the understanding and management of today's complex data processing environments.

01685648   SUPPLIER NUMBER: 15399378   (THIS IS THE FULL TEXT)
Divide and conquer. (developing client/server applications) (Tutorial)
Naecker, Philip A.
DEC Professional, v13, n6, p28(6)
June, 1994
DOCUMENT TYPE: Tutorial   ISSN: 0744-9216   LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2777   LINE COUNT: 00217

ABSTRACT: Developing client/server applications requires careful planning.
Programmers need a minimum of an application development environment (ADE)
that can be used to create GUIs and a relational database that provides
remote access to desktop devices. The functional design of the database
should be created before more detailed issues, such as indexing, are
addressed. Programmers should next define the major processes that will
access the database. Estimates should be made regarding the frequency of
database transactions and the number of records expected in each table.
Control of user access and other security concerns for the database and
target application should also be considered. Programmers need to consider
the user interface elements and where to embed application logic. After the
layering model is reanalyzed, development of the target application may
begin.

TEXT:
        In the client/server model of computing, all elements of an
application are clearly separated from one another and connected via the
network. Breaking an application into these multiple components helps you
build the application as a set of separate clients and servers, enabling
you to develop a client/server application that can adapt well to the
platform, network and database of your choice.
        THE POTENTIAL BENEFITS of a successful client/server computing
environment are so large that they outweigh the substantial startup costs
of developing your first client/server application. A well-designed
client/server application will be more flexible to deploy, because it will
have few dependencies on the client, server or network; be scalable from a
few to a few thousand simultaneous users; and be supportable over a long
life of different hardware and software platforms.
        Client/server is a catch-all phrase that can refer to many kinds of
applications. In this article, we'll limit our discussion to client/server
applications that allow a user on a desktop device to access remote
applications without the loss of the local look and feel.
        To develop a good client/server application of this kind, you need at
a minimum an application development environment (ADE) capable of building
graphical user interfaces and a relational database that can provide remote
access to desktop devices. The better ADEs also provide you with a way to
operate interchangeably on different platforms or with different databases.
        For example, 1 have built several client/server applications using
Vision from Sapiens International Inc. This tool generates applications
that can be executed without any kind of compilation or translation on
several different kinds of platforms, including workstations and Windows NT
machines. The connection to the database is via a mechanism called Logical
Database (LBD). Using LBD, you can easily convert an application from one
database type to another, or to RMS files, as long as you don't depend on
the particular behavior of the database system. All the leading
client/server development environments have similiar functionality, some
better than others.
        Once you decide that you want to use a client/server approach, you
can expect to spend a lot of time choosing tools and gaining skills. Be
careful in the selection of client/server tools; make sure that the tool
you choose will play well with your previous choices for platforms, network
and databases.
        Mashing the Myths
        There are several common myths about client/server computing:
        Myth 1: A server is always a big, dedicated machine. This is not

true. A server may be a small machine. The size of the machine is determined by the difficulty of the workload, not by which way the arrows points in a data flow diagram. A well-designed server need not be dedicated, either. A single machine can serve files or disks, print queues, or network communications. It can also provide time, directory and name services and host user applications -- all at once.

Myth 2: A client is always a small desktop machine. This is also not true. A client may be a very large machine requesting a service from a small special-purpose machine. The client is simply the machine that requests the service from the network, and it may be much larger than the server.

For example, in networks that I design, I include a small, dedicated server machine (outside of a VMScluster if the environment is OpenVMS) that is set up to be very stable. I rarely need to change either the hardware or the software of the server configuration to imporve stability. This server then provides many important network services such as outside network connectivity, name services, network monitoring, and other services that must continue to work when bigger machines are unavailable. The clients for these services ae typically much larger machines than the server that provides them.

Myth 3: Clients requests data, and servers provide it. Many kinds of services consume data instead of providing it. For example, a print server provides printing resources to the network and is generally a data sink rather than a data source. A compute server might require only one number as input and produce one number as output. A log server might just consume data and not provide any output. An X terminal serves and X screen to the network. I like to think of it as a bitmap server, and the program that does that is called, not coincidentally, "the X Server."

Myth 4: Client/server application development is difficult. Difficult compared with what? Compared with the development of applications using traditional, monolithic 3GLs and accessing RMS files, it is difficult. If that's what you're currently doing, you have quite a culture change ahead of you. But if you already use 4GLs, relational databases and fairly modern software engineering practices, the transition is probably not as difficult as people make it out to be. There are some gotchas, but the benefits often far outweigh the costs.

Brother, Can You Spare A Paradigm?

If you can think of clients and servers as big machines/little machines or data sources/sinks, then how can you structure your thinking? I prefer a layering diagram such as that are shown, but almost every application has a user display, user interface layer and database access layer.

You can break an application into multiple client and server components by dividing at one or more of the boundaries between the layers (see Figures 2 and 3). Several applications execute the different layers on at least three different machines. The advantage of the layering paradigm for thinking about client/server application development is that this approach will help you keep functionality localized and thereby maximize your flexibility.

For example, if you make sure that the user interface toolkit works with multiple database vendors, you can integrate data from several diffierent databases at the user interface. For example, you might design an accounting application but later find you also need human resources data, which is stored in a database from a separate vendor.

Conversely, if a single database can be accessed by several diffeent user interfaces, then ou can easily provide customized user interfaces for different groups of users or on different platforms. For example, you might have a regular user interface on all your desktop platforms and a manager's interface that runs just on Macs. The right choice for the boundaries between components is specific to your a pplication, but there are several guidelines.

1. Split your application so that the user interface is sparated from the lower layers. The X Window System provides a simple way to present the user display layer separately from the others, so you can usually get that degree of separation "for free" if you use X as the user interface.

2. You almost always want to separate the database access layer from the others. If you decide this in advance, you can probably accomplish this separation without too much work by using the remote database access tools

available through your database system.

3. If possible, I like to build applications with little or no application logic. I do this by embedding any business rules directly in the database. if all the updating is done via the user interface, I can probably embed in the user interface any business rules that cannot be implemented by the database system. Output from the application can then be just report-writing and similar activities that reside in the user interface layer. The alternative is to build an application logic layer, but make it as small as possible, and try to invoke the functionality of the application logic layer directly from the user interface. The trouble with this approach is that it leaves you with an application logic layer to port to different platforms, which can be a pain.

4. Choose tools and supported platforms such that you can use the tool on all the platforms you want to support. For the user interface layer, several tools can generate good uers interfaces on at least X and Windows NT, and some also support Macs and even character-cell terminals. I don't really like the idea of limiting the look and feel of an application by what works well on a character-cell terminal that it pretending to be a "real" desktop device, but that is what some users want. For the database layer, your choices are probably limited by the databases supported in-house. But don't ignore the possibility of using ordinary files -- such as ISAM on OpenVMS, VSAM on IBM machines and C-ISAM on other platforms -- for at least part of your application data.

For example, Digital provides a tool called RMS Access for R db that presents RMS files to the database access layer as if they were tables in a relational database. CNA Computer Systems Engineering Inc. offers ConnX, which provides Open Database Connectivity (ODBC) access to RMS files via DECnet or pathworks. Many tool and database vendors provide similar capabilities, although they generally use a proprietary database access layer on the top.

Getting Started

If you haven't spent much time looking into client/server development, here is a thumbnail sketch of how the process works. When you design and build client/server applications, build them as a set of separate clients and servers, not as a single integrated client/server application. That is, at each boundary in the layering diagram, think about how you can build this component so that different layers can be plugged in above and below this layer but still provide access to the functionality within this layer. The cornerstone of good client/server implementation is to implement policy within a layer and export functionality to other layers.

If you want your database to represent a certain relationship between data elements, which is a good referential integrity policy, then it is up to the database to guarantee that the relationship is preserved across operations. The design and implementation of the database cannot expect the client applications to maintain the integrity of the database. It cannot "export policy." The database server can, however, return errors to applications that do not play by the rules necessary to presever database integrity.

The database can and should export functionality, however. For example, if the application requires that a customer number be provided for every new customer or that all order-line items be deleted whenever an order header is deleted, the database may provide these functions.

From the point of view of the user interface layer, policy includes the entire look and feel of the application. This policy should be localized to the user interface, not exported into other layers. This approach allows you to have several interfaces with different apprearances and behaviors. You can even let users choose among trhem, depending on their needs and preferences. Of course, you probably want to also have some of the user interfaces availabel on more than one platform, but this is nto necessarily so. For example, Mac users might be more comfortable with a drag-and-drop interface, whereas Motif users might want point-and-click.

Just Do It -- With Care

To make client/server development work, careful planning is critical. But you also need to use an iterative software development methodology. Build your database, the application layer (if you need it) and at least one user interface. If you intend to provide any element of your application running on more than one platform, try multiple platforms early

rather than assume they wil●ork at the end of your develop●t. There are alays files in the client/server ointment.

I recommend that new users not build their first large client/server application by trying to shoehorn client/server components into an existing application. In my experience, most existing applications do not have a sufficiently clearn layering model to allow "adding just a new user interface" or "just distributing the database." However, if you can find a cleanly layered application, by all means try that one first.

Given a good layering diagram, you'll find that the way to build a new application is by divide and conquer. For example, I'm a fan of data modeling. I build applications by iteratively building the database tha represents the application data and then building the tools to operate on the data. For most applications, I find that the following client/server development steps work well.

1. Create the logical design for the database. Steer clear of any physical design issues such as indexes, since working on these will only slow you down.

2. Define the major transactions that will operate on the database. This step will help you identify the major business rules that must be implemented by the database.

3. Estimate the number of **transactions** per unit **time** and number of records in each **database** table. This is critical for **sizing** the **database** and **database** **server** , and will help you design the user interfaces.

4. Define the access control and security isues for your database and application. Generally, client/server applications have little access control implemented in the user interface and application logic layers, and most of it implemented in the database access and database layers. This approach gives you maximum flexibility and maximum security. If you rely on your user interface or application logic layers to provide access control, you leave all sorts of security holes. User interface tools are usually easy enough to use that most users can roll their own, and if they do that you don't have security in the database access or database layers, then you can be sure that your users will soon gain undesired access to your database.

5. Take a brief detour at this time and define the user interface elements that will maintain what I call the system data. This is the base data that is used by many of the tables in the database, such s tables of type codes (transaction types, user types, report types, and so on), table that translate identifiers in database records to the corresponding identifiers outside the database (for example, from Employee ID to Employee Account Number), and so on.

By building these user interface elements at this point, you gain several advantages. First, you can use the new tools to populate the reference tables. Second, you gain a way to communicate with the application users to show them how they will maintain the application data using the new user interface tools.

6. Define the critical transactional user interface elements. This is usually where yor first difficulties arise in building a client/server application, because at this point you often have to decide where to embed application logic and processing rules. Where possible, I like to embed this logic in the database, because usually the database server is a fast machine. Further, embedding logic in the database will ensure that I don't have that logic scattered around on dozens of desktops where it is relatively hard to maintain.

7. Complete the client/server model. Now is the time to revisit the layering diagram and show how you can complete all of the requirments of the new system using the layering you have sketched out. Where will report printing be served? Will there be a batch processing interface to the new distributed application, and where will that run? Will the database servers need to be multi-threaded?

8. Finish building the application, following the same development methodology you would for any other application.

THE POWER OF client/server applications does not come without a price. The software developer and maintainer must become intimately familiar with many more elements of the process, from networks to databases to user interfaces to multiple platforms. And although debugging is penerally simplified by the strict layering of the cleint/server model,

tracking down intermittent ●blems can call for all your gu●. On the
other hand, if you don't like a particular client or server, you can just
build another an plug it in!

SPECIAL FEATURES: illustration; chart
DESCRIPTORS: Tutorial; Client/Server Architecture; Program Development
 Techniques; Guidelines; Programming; Logical Organization
SIC CODES: 7371 Computer programming services
FILE SEGMENT: CD File 275

22/9/14   (Item 2 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
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01554395   Supplier Number: 47867240   (THIS IS THE FULLTEXT)
**Compaq Releases Industry's First Sizing and Configuration Tool for
  Microsoft SQL Server 6.5.**
Business Wire, p07291422
July 29, 1997
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 358
TEXT:
HOUSTON--(BUSINESS WIRE)--July 29, 1997-- Compaq Computer Corporation
(NYSE: CPQ) announced today it is providing the first enterprise **server
sizing** tool for Microsoft SQL **Server** 6.5. Uniquely developed by Compaq,
with assistance from Microsoft's SQL **Server** **Group**, the newtool is being
offered to customers free of charge as a download filefrom the Compaq Web
site. The Compaq ProLiant Server Sizer for Microsoft SQL Server provides a
quick and consistent way for customers to determine the "best-fit" server
for their On-Line-Transaction-Processing applications. This easy to use,
Windows-based, tool allows customers to take advantage of the extensive
technical knowledge Compaq has developed for ProLiant servers running
Microsoft SQL Server. Theinteractive tool also allows users to investigate
alternatives by varying anticipated workloads, user populations, and the
size of numerous parameters.
      For more details and/or to download the Compaq Sizer for Microsoft
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22/9/25 (Item 3 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
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09150020 SUPPLIER NUMBER: 18916219 (THIS IS THE FULL TEXT)
Designing for satisfied users. (client servers)(includes related article on the creation of a business transaction profile)
Edlund, Albert E.; Parker, Sharon R.
Business Communications Review, v26, n11, p75(4)
Nov, 1996
ISSN: 0162-3885 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 2428 LINE COUNT: 00203

ABSTRACT: Different types of client-server applications can operate over
router networks. Fair response times are achieved when capacity planning is
included in the design phase of distributed applications. Monitoring
applications also help maintain running records to help planners know the
effect of applications on increased traffic. Finally, networking staff
should remain close to end users and application development groups.

TEXT:
Networks can get bogged down by factors that are less than obvious.
Your applications and network need to work together effectively.
As organizations adopt the client-server model, data networks have
evolved from terminal-to-host connections into LAN-based packet networks
linked primarily with routers. Although the pace of this migration has been
more conservative than originally forecast, important questions are being
asked:
* What happens when client-server applications are merged over
router-based networks?
* What is the potential impact to the users of the applications?
* What is the potential impact to other users of the network
facilities?
Those who grew up in a mainframe world recall similar questions and
see them as part of a legacy that has largely been ignored by advocates of
distributed applications and router-based networks. In scorning the
mainframe, they also dismiss the legacy process, with its strong emphasis
on systems management disciplines.
Yearly reviews of capacity information, for example - relatively
common in mainframe environments - are practically unheard of in routed
internetworks. The consensus seems to be that capacity planning is
irrelevant, that ever-increasing bandwidth makes planning "obsolete." But
while that conventional wisdom might hold in a single LAN environment, when
applications are extended across multiple LANs and multiple sites, capacity
planning is critical.
Different Domains: Challenge of Client-Server
Unlike the OSI stack, with its tightly layered view of networked
applications, the domains of client-server applications and routers are
often organizationally isolated from one another (ILLUSTRATION FOR FIGURE 1
OMITTED). Different workgroups, or entire departments, are devoted either
to the physical process of connecting locations (networking) or to the
logical process of connecting users to data (applications).
Integrating efforts is a challenge because the two groups often work
from different assumptions and are unaware of each other's design
decisions. Often neither understands how new applications will affect the
network.
The term client-server refers simply to two or more applications that

share the handling of information, typically across a network. Generally, the applications distribute responsibilities among the available resources for one of the following:

    * Distributed Presentation: These are arguably the easiest client-server applications to develop. Initially called "screen scrapers," now referred to as "thin clients," these combine GUI interfaces on user workstations with legacy host applications.

    The current focus on "thin client" implementations is also roughly comparable to the "X-windows" environment of the Unix world. The network impacts of distributed presentation applications increase as the user interface incorporates more graphic images and mouse clicks, and as more calls are exchanged with the host/server.

    * Distributed Data: These are more complex in-terms of both systems management and network capacity. Where data are stored not only affects how changes are controlled and how data are secured, but it can also dramatically affect the network's (TABULAR DATA FOR TABLE 1 OMITTED) traffic load. Distributed data applications can be described as either very fast, interactive (small, numerous queries) or as short, file transfer (larger block size) applications.

    From a network perspective, stored procedure calls or static SQL (structured query language) calls are a better bet than dynamic SQL, since misusing the latter can put terabytes of data onto the network. For example, imagine the network traffic that could be generated by an ad hoc query, "show me all our customer data," delivered to multiple databases. Watch out on upcoming data-warehousing projects, since designers are fond of dynamic queries for data mining.

    * Distributed Applications Processing: The most difficult aspect of this sort of application has to do with the cost-cutting expectations it generates. Proposals typically calculate savings by off-loading complex host computing cycles and reducing staff, but the cost of delivering consistent user response times is rarely factored in.

    Remote procedure calls (RPCs), such as those used in the Open Software Foundation's (OSF's) Distributed Computing Environment (DCE), are a favored technique in distributed applications processing. But not only can RPCs load a network with enough additional traffic to delay response time, but also the parameters to design, model and measure the impacts of RPCs have yet to be built into most network or application design products.

    Another problem is the potential mismatch between the application developer's view of the network and the network manager's plans. For example, an application designed for a connection-oriented infrastructure (e.g., SNA) is not easily moved to a connectionless one (e.g., LANs and routers). In contrast, an RPC/DCE approach presupposes an IP network substructure.

    Table 1 summarizes typical characteristics and impacts of the three types of distributed applications. Client-server applications developed on a LAN, where bandwidth is presumed to be free and plentiful, can have dramatically unpleasant effects - affecting response times and throughput for many users - when they are rolled out, unchanged, across a shared backbone or wide area.

    Two Examples

    The basic factors in data network design are simple: How many messages are to be transferred and what size are they? The answers, plus source/destination information and throughput/response time expectations, provide designers with the parameters for a simple network topology. But here's what happened when one company forget that the size and number of the messages going across a network has a similar effect on response time as the available bandwidth.

    A client-server application was being developed that employees would over the LAN and via dial-in facilities. The target environment was a distributed database application running on a Unix server, which consulted the mainframe if it couldn't answer a query. The development target was 300 users, with an objective of one **transaction** per **minute** per user and a network turnaround of less than one second. Initial **sizing** of the environment predicted the **server** would have to handle about 20 **transactions** per **second** .

    The flaw was that nobody bothered to define what a transaction looked like from a network perspective. No one asked the most basic question: "What happens when I press the 'Enter' key?"

Answering this question revealed the traffic characteristics of client-server applications. What users call "transactions" typically consist of multiple send-receive sequences. Having multiple network transactions support a single business transaction is not unique to any specific application model or network protocol (ILLUSTRATION FOR FIGURE 2 OMITTED), and it is possible (even necessary) that a subsecond network would support a many-second business transaction.

Identifying the number and size of information packets associated with transactions on a network is called "profiling" the application. For example, in Figure 3, the vertical axis is number of packets, while the horizontal axis is packet size.

In the case cited, profiling the application and modeling network impacts revealed that the number and size of the transactions would prevent the local LAN backbone from handling the projected load, and that remote users would get unsatisfactory response times. On top of resegmenting and adding bandwidth to the LAN, major changes to the application would be required before rolling it out to remote users.

Profiling pilot applications before rollout can avoid these problems. Unfortunately, gathering the profile data takes a hand-coded management information base (MIB) in the application itself or a very carefully scripted test scenario (see "How to Profile a Business Transaction").

In another case, a client-server application was purchased to support remote branch offices over a router-based network with T1 and 256-kbps links. When remote users saw applications running at headquarters with subsecond response times, they expressed dissatisfaction with the slower performance they were experiencing. The CIO wanted to understand the difference in performance, pointing to the company-wide perception that the infrastructure was based on "high-speed lines."

Here the flaw was less a design issue than one of unrealistic expectations. Mr. CIO got a short course in network delay, the end-to-end path is never faster than the slowest link along the way. Delays are additive in a serial path, and can be significantly affected by size and number of messages, line turnarounds and networking protocols. Thus there are often big differences between raw link speed and effective bandwidth.

A rough estimate of the potential throughput of a serial path (Y) can be made using simple arithmetic and the following formula:

$1 / 1/A + 1/B + 1/C + 1/N = Y$

A simple example is to calculate the effective speed of: Link A, which runs at 19.2 kbps into a packet switch; connected by Link B, at 56 kbps, to another packet switch; and finally Link C, another 19.2-kbps tail circuit. In this case, A, B and C would be replaced by the three link speeds in the path (i.e., 19,200, 56,000 and 19,200) and the effective speed (Y) would come to about 8,195 bps.

Obviously, additional issues must be considered when modeling complex network paths. But this rule of thumb illustrates that the user's interface speed can be highly unreliable as a network performance indicator. (Anyone surfing the Web with a 28.8 modem and enduring glacial downloads has seen this principle in action!)

Besides effective speed, issues affecting response time include hop count, link utilization and application data characteristics. Moreover, every network resource in the path of a transaction (LAN, router, CSU, T1 multiplexer, intermediate servers, bridges, repeaters) adds some delay, however trivial. Each of these components decreases the effective data rate of the total path, and increases the aggregate error rate and delay. The old rule "Keep It Simple" is just as relevant today as it was when links topped out at 1,200 bps.

Latency analysis by component and transmission medium may identify where delays can be decreased. Fortunately, and unlike the application-profiling issue above, performance data and analysis tools (e.g., Network General's Sniffer) are readily available for most of these components.

Conclusion

Many varieties of client-server applications can operate over router networks. From a networking perspective, some are benign and some malignant; end users experience the difference through response time.

Satisfactory response times are more likely if capacity planning is incorporated in the design phase of distributed applications. Subsequently, applications should be monitored for utilization not only of network links,

but also of router CPU. Thu● ●unning records can be maintai● ●that will help planners understand the impacts of applications on traffic growth.

The characteristics of networked applications - especially HTML, multimedia and data warehousing - dramatically reflect the client-server trend. As these come on line, networking staffs must stay closely linked to the end users and to the application development groups. Existing data networks may or may not be affected by new client-server applications; the design of both should be revalidated against expectations

Eight Design Guidelines

Following eight simple rules can help make your client-server application successful in the eyes of users and a useful business tool.

1. From a user perspective, most client-server applications are interactive. Therefore, response time is a key criterion.

2. Response time is easy, the hard part is money - better response time usually costs more for upgraded workstations, processor complexes, network hardware or bandwidth.

3. If possible, keep message sizes small to reduce queue time in the network. This must be balanced against throughput and turnaround times.

4. When evaluating network performance of a new application, use a low-speed link, not production LANs or wide-area networks. If the application can deliver satisfactory response times at 9600 bps it should do fine over higher speeds. In addition, there is a relatively good chance that it will not negatively affect the router network.

5. Always attach routers at the highest possible speeds.

6. Keep hop counts to a minimum (each hop adds delay).

7. Capacity planning affects costs. Thorough planning can reduce costs, while ineffective or nonexistent capacity planning can translate to an increase in the cost of network facilities.

8. Profiling new applications, whether they are developed internally or purchased, should be done to determine the conditions under which an application should be allowed on the network

How to Profile a Business Transaction

The process of building a business transaction profile is based on link-level traces of network activity. The steps are:

1. Identify the test cases, typically the three or four most common business transactions supported by the application, and arrange for someone who is familiar with the business process to perform the data entry. Also test a worst-case data scenario (i.e., maximum number of frames, maximum number of bytes).

2. Build a test bed for the data capture process. This should parallel, as closely as possible, the production environment. Do not test the network using application development and testing tools - they provide information that application designers may find useful, but they don't test a network and may add superfluous transactions to the test environment.

3. Document the structure of the network to be used in the test. Include the network addresses of all the servers and workstations that participate in the setup and execution of the transaction. This may be as simple as two devices (one server, one workstation) or it may include four or more devices (workstation, data server, domain name server, mainframe, etc.).

4. Using an external probe (e.g., IBM's Dataglance, Network General's Sniffer), trace the individual test cases. Use separate capture files for each scenario.

5. Captured data can be exported to a data analysis tool (e.g., Lotus Approach, Microsoft Access) to create histograms of the traffic patterns. These can also catalog traffic/application data for input into the network capacity planning process

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SPECIAL FEATURES: illustration; chart; graph
INDUSTRY CODES/NAMES: TELC   Telecommunications; BUSN   Any type of

business
DESCRIPTORS: Computer networks--Design and construction; Network
 architecture--Technique; Client/server architecture--Technique
 FILE SEGMENT: TI File 148

22/9/31   (Item 3 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
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ABSTRACT: In response to the need for more precise methodologies for
analyzing network design and cost-performance trade-offs, vendors have
introduced a range of tools for simulating network performance that can be
applied to a variety of network planning and design tasks. Comdisco Systems
Inc.'s BONeS PlanNet enterprise network simulator, a typical simulator,
allows network managers to graphically represent the network. A key PlanNet
feature allows the user to automatically vary many of the model parameters.
The applications of simulation in network management include: 1.
segmentation and backbone design, 2. link sizing and capacity planning, 3.
server planning, 4. router and bridge sizing and capacity planning, and 5.
network performance enhancement.
TEXT: As enterprise networks supporting mission-critical applications grow
in size and complexity, network performance becomes a critical issue.
"Back-of-the-envelope" analyses no longer cut the mustard. More precise
methodologies for analyzing design and cost/performance trade-offs are
needed.

In response, vendors have introduced a range of tools for simulating
network performance that can be applied to a variety of network planning
and design tasks.

The first piece of this two-part article describes a number of the issues
involved in simulation and the benefits and value of performance analysis.

The second part, which will appear next week, will present a detailed case
study showing how simulation is used in network segmentation and backbone
design.

The study will introduce a methodology for using a simulator, starting with
data collection issues and ending with interpretation of simulated
performance plots.

SIMULATION USAGE
Although there are a number of simulators on the market, to get an idea of
what the tools typically consist of, we will focus on Comdisco Systems,
Inc.'s BONeS PlanNet enterprise network simulator.

PlanNet allows network managers to graphically represent the network by
placing and connecting icons that represent network components, describe
their properties and specify network traffic to be simulated. A wide range
of network and application performance statistics may be collected and
plotted to give insights into various performance trade-offs.

PlanNet comprises a simulation engine and a number of modules (models) for
simulating local-area network segments, wide-area network links,
interconnect devices (such as bridges and routers) and traffic generators
(such as traffic sources and client/server interaction). Each module
collects performance statistics when statistics collection is turned on.
These collectors report primarily on delays, utilization and throughput for

the respective modules.

A key PlanNet feature allows you to automatically vary many of the model parameters. For example, you can vary the number of users on a LAN segment so that in a single simulation run, PlanNet will simulate your network model for a range of values for the parameter specified. The simulation produces comparative performance plots, showing the performance of your network as the selected parameter varies over the specified range of values.

These features make-PlanNet convenient for sizing, capacity planning and numerous what-if analyses for the various devices, LAN segments and WAN links in your network.

The following sections identify and illustrate some of the many applications of simulation in network management, showing what simulation can be used for.

SEGMENTATION, BACKBONE DESIGN

As network usage and loading increases, it will eventually become necessary to further segment the network. Network segmentation and backbone design, therefore, deal with analyses of network capacity to support additional users and applications, and a performance evaluation of various segmentation and backbone designs.

If done proactively, there will be no surprises and the network manager will be able to plan and budget for the required network changes.
Key performance measures in segmentation analysis include:

* Channel delays, utilization and throughput as a function of the number of users or the application load.

* Message or application transaction end-to-end delay, or response, as a function of the number of users.

As an example of this, PlanNet performance plots that show mean total media access control layer channel message delays on two 4M bit/sec token rings are presented in Figure 1 on page 33. (Figure 1 omitted)

The "knee" on a delay curve shows when the contention for a shared resource--in this instance, the communications channel--becomes significant. And, of course, application transaction response time is of ultimate interest to your customers, the network users.

As you well know, excessive transaction response time will cause your telephone to ring.

This proactive use of simulation will enable you to better plan for and manage change, saving your company money. The cost savings come from avoiding overdesign and being able to implement network expansions just in time.

LINK SIZING, CAPACITY PLANS

As corporate networks expand, more bandwidth will be needed to support users at remote office sites. But there will inevitably be the trade-off between performance and bandwidth costs.

WAN link sizing and capacity planning deal with analyses of circuit capacity to support projected growth and the sizing of these circuits for satisfactory application transaction response. Here again, proactive use of simulation can not only save money, but also result in better service for network users.

Key performance measures to look at include:

* Application transaction response, link delays and utilization as a

function of link speed (for sizing).

* Application transaction response, link delays and utilization as a function of the number of users (for capacity planning).
A link-sizing analysis using PlanNet generated the performance plots exhibited in Figure 2 on this page, which shows application transaction response as a function of link bandwidth. (Figure 2 omitted)

WAN link performance analyses using simulation can help optimize performance while, at the same time, minimizing costs. You know explicitly how much performance costs, not just how much bandwidth costs, so that you can make informed business decisions.

SIZING, CAPACITY PLANNING

Another key use of simulation in network management is in server planning.

Is it the communications channel or the server that is likely to cause excessive delays and unacceptable transaction response? Which will create bottlenecks first? When will the server become a bottleneck? Is the bottleneck in the server CPU or disk subsystem? How should the server be configured for satisfactory application transaction response?

For planning and budgeting purposes, it is nice to know when you will run out of server capacity.
It is also helpful to know whether it will take a faster server disk or CPU to bring application transaction response down to acceptable levels.

Simulation supports the resolution of such network management issues. It can help you size your servers for optimum transaction response, as well as help you plan and budget your server capacity upgrades.

The key performance measures for server sizing and capacity planning are:

* Application transaction response, server CPU, and disk delays and utilization as a function of server CPU power and disk **speed** (for **server sizing**).

* Application **transaction** response, **server** **CPU** , and disk delays and **utilizations** as a function of the number of users (for capacity planning).

OTHER SIMULATION APPS

Simulation can be beneficially applied to a wide variety of other network planning and design issues and various what-if planning studies.
A good foundation, or reference, for such analyses is a baseline performance simulation and analysis. This consists of simulation models as well as performance simulations of your current network to serve as a baseline for planning and troubleshooting.

The baseline not only serves as a reference for simulating various what-if planning scenarios, but it can also assist in troubleshooting network performance problems. Departures from the baseline performance can then be diagnosed as to whether it resulted from network growth or some hardware or software problem.

Other simulation applications include:

* Router and bridge sizing and capacity planning. Sizing bridges and routers for required application transaction response and analyses of their capacity to support additional users and applications.

* Application traffic engineering. Analyses of performance implications of network application architectures and deployment strategies.

* Reconfiguration analyses. Analyses of performance implications of proposed net reconfigurations.

* Network performance enhancement. Enhancement of application performance through optimum system sizing and configuration.

In addition, a wide variety of special logical design and planning studies, such as tuning token rings using priorities, synchronous bandwidth allocation on Fiber Distributed Data Interface networks and many other design analyses can be performed with simulation.

Jazwinski is president and Laszakovitis is a consulting network engineer with Network Performance Corp. (NPC). NPC, located in Dunkirk, Md., provides network design consulting services using state-of-the-art design simulation tools. They may be reached at (301) 855-4600.

THIS IS THE FULL-TEXT.   Copyright Network World Inc 1993
COMPANY NAMES:
Comdisco Inc (DUNS:05-431-8936 TICKER:CDO)
GEOGRAPHIC NAMES: US

22/3,K/1   (Item 1 from ●●●●: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

02395997   SUPPLIER NUMBER: 61950595   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**The Dell PowerEdge 4400: A Departmental Powerhouse.(Hardware
  Review)(Evaluation)**
Fetters, Dave
Network Computing, 28
April 17, 2000
DOCUMENT TYPE: Evaluation   ISSN: 1046-4468   LANGUAGE: English
RECORD TYPE: Fulltext
WORD COUNT: 969   LINE COUNT: 00077

...   servers in this market use a dual-peer PCI bus configuration.
Compared with Dell's **class** -leading enterprise **server** , the PowerEdge
6300 (see "Dell's PowerEdge 6300: Sharp Edge Over Network Connectivity" at
www...

...support. Even IBM Corp.'s Netfinity 5500 M20, the top performer in our
quad-processor **server** tests (see " **Sizing** Up the Quad Squad," at
www.networkcomputing.com/1019/1019f2.html), doesn't have a...

 22/3,K/2   (Item 2 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

02341736   SUPPLIER NUMBER: 56471158   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Buyer's Guide: Multiprocessor Servers.(Technology Information)
Fetters, Dave
Network Computing, 136
Oct 18, 1999
ISSN: 1046-4468   LANGUAGE: English   RECORD TYPE: Fulltext
WORD COUNT: 1242   LINE COUNT: 00101

...   and two 50-GB hard drives. As seen in the results of our
quad-processor **server** tests (" **Sizing** Up the Quad Squad,"
www.networkcomputing.com/ 1019/1019f2.html), you'd quickly hit a ceiling,
with **CPU   utilization** falling short of the 100 percent maximum. Using 10
10-GB drives in place of...

 22/3,K/3   (Item 3 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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02207457   SUPPLIER NUMBER: 20964039   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Live (almost), from New York - it's PC expo.(news from HP) (News Briefs)
HP Professional, v12, n7, p4(1)
July, 1998
ISSN: 0896-145X   LANGUAGE: English   RECORD TYPE: Fulltext
WORD COUNT: 252   LINE COUNT: 00022

TEXT:
     ...s announcements from last month's annual PC extravaganza: Support
For Microsoft's New NT **Server   Family** -HP will be working with the
Redmondians to help customers move business-critical applications to...

...across the NetServer L Series. The two firms will be working together to
provide Terminal **Server   sizing** information and guidelines. For more
information, go to www.hp.com/netserver/techlib.

 22/3,K/4   (Item 4 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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02192380   SUPPLIER NUMB⬤19722417   (USE FORMAT 7 OR ⬤R FULL TEXT)
Fun with partitioning; concepts and processes for developing a sound
  application partitioning scheme. (client/server) (Technology Information)
Linthicum, David S.
DBMS, v10, n10, p24(3)
Sep, 1997
ISSN: 1041-5173   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 2651   LINE COUNT: 00224

...   and the enabling technology in use. A common mistake is to try and
scale through **server   sizing** . Buying bigger **processors**   to scale to
larger **user**   and processing loads might seem to make good sense, but it's
the architecture and...

  22/3,K/5   (Item 5 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01685648   SUPPLIER NUMBER: 15399378   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Divide and conquer. (developing client/server applications) (Tutorial)
Naecker, Philip A.
DEC Professional, v13, n6, p28(6)
June, 1994
DOCUMENT TYPE: Tutorial   ISSN: 0744-9216   LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2777   LINE COUNT: 00217

...   major business rules that must be implemented by the database.
     3. Estimate the number of **transactions** per unit **time**   and number
of records in each **database**   table. This is critical for **sizing**   the
database   and **database**   **server** , and will help you design the user
interfaces.
     4. Define the access control and security...

  22/3,K/6   (Item 6 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01678411   SUPPLIER NUMBER: 15096881   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Pyramid power. (Pyramid Technology will use Aston Brooke Software's
  DB-Vision 1.2.1 data base performance monitor on Pyramid's MIServer ES
  series of UNIX-based servers) (Brief Article)
EXE, v8, n9, p8(1)
March, 1994
DOCUMENT TYPE: Brief Article   ISSN: 0268-6872   LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT
WORD COUNT: 84   LINE COUNT: 00006

TEXT:
     ...2.1 on its MIServer ES Series of large Unix servers. DB-Vision is
a **database**   performance monitor geared for mainframe- **class**   system
management on open systems, something Pyramid is hoping will attract
current mainframe users, thinking of down- **sizing** , towards its **servers** .
The product will allow administrators of Pyramid platforms to monitor an
unlimited amount of Oracle...

  22/3,K/7   (Item 7 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01553026   SUPPLIER NUMBER: 13319945   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Green shoots of discovery. (Andersen Consulting integrates custom software
  for BF Goodrich)(Software: Computer Aided Manufacturing)
Evans, David
Computer Weekly, p37(1)

Nov 26, 1992
ISSN: 0010-4787   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1422   LINE COUNT: 00111

...   larger package - a unique shrink-wrapped solution for the process
industry that, for the first **time** , integrated plant level IT **activities**
with the entrepreneurial aspect. It was also an idea concurrent with the
trend towards down- **sizing** and client- **server** architectures.
     Soon the vision began to take form. As the Andersen R&D team reworked
...

 22/3,K/8   (Item 8 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01459324   SUPPLIER NUMBER: 11441428   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Pathworks networks: a supportable architecture. (Workstations) (Column)
Bynon, David W.
DEC Professional, v10, n10, p120(3)
Oct, 1991
DOCUMENT TYPE: Column   ISSN: 0744-9216   LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2465   LINE COUNT: 00191

...   products such as the X.400 Mail Gateway or Distributed Directory
Service are not. By **sizing** a **server** for a dedicated service, such as a
gateway, you can save the higher license cost. Also, it is not necessary to
use **servers** of the same **kind** . If your primary system architecture is
VMS but exceptional file server performance or cost is...

 22/3,K/9   (Item 9 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01321542   SUPPLIER NUMBER: 07058296   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Benchmark results: let the buyer beware.
Zornes, J. Aaron
MIS Week, v10, n6, p51(1)
Feb 6, 1989
ISSN: 0199-8838   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1324   LINE COUNT: 00112

...   overstate results. For example, some TP1 tests use 100,000 row
account tables for all **TPS** ratings, while DebitCredit ratings require
100,000 accounts per one **TPS** being measured. The smaller the table, the
higher the probability the data resides in cache...

 22/3,K/10   (Item 10 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01247767   SUPPLIER NUMBER: 06872335   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Oracle claims multiple OLTP speed records. (on-line transaction processing)
   (Oracle 6.0) (product announcement)
Feuche, Mike
MIS Week, v9, n30, p1(3)
July 25, 1988
DOCUMENT TYPE: product announcement   ISSN: 0199-8838   LANGUAGE:
   ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1745   LINE COUNT: 00143

...   descriptions of the TP1 and Debit-Credit benchmarks provde
straightforward guidelines to such elements as **database**   **sizing** ,
transaction logging and response **time** . We await with interest more
detailed benchmark information that will indicate Oracle's degree of...

22/3,K/11   (Item 1 from file: 47)
DIALOG(R)File   47:Gale Group Magazine DB(TM)
(c) 2002 The Gale group. All rts. reserv.

03319440   SUPPLIER NUMBER: 08216317   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Revisiting DBMS benchmarks. (the Set Query benchmark for comparing
  commercial database applications)**
O'Neil, Patrick E.
Datamation, v35, n18, p47(4)
Sept 15, 1989
ISSN: 1062-8363   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2159   LINE COUNT: 00179

...   records with five conditions (query 4B).
    Queries in Direct Marketing
    Direct marketing is a second **type** of **application** that relies upon
set queries. These applications use queries to identify lists of
individuals or...

...are most likely to purchase a given product or service. List selection
usually involves two **database** actions: first, effecting a preliminary
sizing and exploration of possible criteria for selection and, second,
retrieving the data for mailings or...

22/3,K/12   (Item 2 from file: 47)
DIALOG(R)File   47:Gale Group Magazine DB(TM)
(c) 2002 The Gale group. All rts. reserv.

03225751   SUPPLIER NUMBER: 07328621   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Toward an equitable benchmark. (on-line transaction processing) (includes
  related article on difficulty of on-line transaction processing
  benchmarks)**
Serlin, Omri
Datamation, v35, n3, p47(4)
Feb 1, 1989
ISSN: 1062-8363   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2498   LINE COUNT: 00200

...   TPC Benchmark B, the next candidate for standardization, is
expected to be more like the **database** -only Tpl test.
    File **sizing** is one of the key areas in which liberties have been
taken in past executions...the three key files--the so-called ABT
(accounts, branch, and teller) files. For each **tps** presented to the
system, a specified number of ABT records must exist. Thus, for systems
claiming higher **tps** ratings, larger files must be used. Especially
critical is the accounts file, which should have 100,000 records of 100
bytes each for each **tps** . Thus, a test reporting 100 **tps** should have
used 10 million accounts records, occupying at least 1GB of disk space.
    A...

22/3,K/13   (Item 1 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2002 The Gale Group. All rts. reserv.

02573470   Supplier Number: 63520252   (USE FORMAT 7 FOR FULLTEXT)
**Trend Micro's InterScan VirusWall First Antivirus Product to be SunTone
  Certified for ASP Deployment.**
Business Wire, p2293
July 18, 2000
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1096

...   a 24x7 service provider environment. Extensive testing of InterScan

VirusWall, including throughput measurement on a **variety** of in enterprise grade **server** platforms and **sizing** tests in multiple configurations, was conducted at Sun Microsystems Service Provider Labs. In addition, Trend...

22/3,K/14   (Item 2 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2002 The Gale Group. All rts. reserv.

01554395   Supplier Number: 47867240   (USE FORMAT 7 FOR FULLTEXT)
**Compaq Releases Industry's First Sizing and Configuration Tool for
  Microsoft SQL Server 6.5.**
Business Wire, p07291422
July 29, 1997
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 358

     (USE FORMAT 7 FOR FULLTEXT)
TEXT:
...29, 1997-- Compaq Computer Corporation (NYSE: CPQ) announced today it is providing the first enterprise **server** **sizing** tool for Microsoft SQL **Server** 6.5. Uniquely developed by Compaq, with assistance from Microsoft's SQL **Server** **Group** , the newtool is being offered to customers free of charge as a download filefrom the...

22/3,K/15   (Item 3 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2002 The Gale Group. All rts. reserv.

01435426   Supplier Number: 46776731   (USE FORMAT 7 FOR FULLTEXT)
**Aberdeen Group and Atre Associates Among Four More Firms to Join
  Client/Server Labs' Testing Services Network.**
Business Wire, p10070072
Oct 7, 1996
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1066

...   marketing, Client/Server Labs.
     Peter Kastner, vice president with the internationally known consulting firm Aberdeen **Group** states, "We recognize that Client/ **Server** Labs is one of the leading providers of accurate, objective and real world-based performance...

...and expertise of CSL will allow us to go one step further in designing and **sizing** client/ **server** systems that will predictably meet the performance goals of our customers."
     Atre Associates, which provides...

22/3,K/16   (Item 4 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
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01285220   Supplier Number: 45400520   (USE FORMAT 7 FOR FULLTEXT)
MICROSOFT ANNOUNCES SNA SERVER VERSION 2.11
PR Newswire, pN/A
March 13, 1995
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 2073

...   such as NetWare(R), Banyan(R) and
     TCP/IP environments. Among the topics covered are **server** **sizing**
     recommendations for CPU **types** and memory for various usage patterns,

preinstallation guide███s, enterprise rollout informa███ and
maintenance and troubleshooting...

 22/3,K/17   (Item 5 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2002 The Gale Group. All rts. reserv.

01037970   Supplier Number: 40020467 (USE FORMAT 7 FOR FULLTEXT)
**REIFER CONSULTANTS, INC. is pleased to announce the release of an exciting
  new product called ASSET-R.**
PR Newswire, pN/A
April 6, 1987
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 285

...   growth versus functionality and schedule during
     their estimating sessions.

     * ASSET-R allows you to link **sizing** estimates with cost models,
      database managers, spreadsheets and a **variety** of other personal
     computer-based **software** . It is fully supported with complete
     documentation, training and product consulting expertise by an
     established...

 22/3,K/18   (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

03905363   Supplier Number: 50096151 (USE FORMAT 7 FOR FULLTEXT)
-HEWLETT-PACKARD: HP supports Microsoft's thin-client/server solution
M2 Presswire, pN/A
June 17, 1998
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 675

   (USE FORMAT 7 FOR FULLTEXT)
TEXT:
...announced its support of Microsoft's latest addition to the Microsoft(r)
Windows NT(r) **Server   family** , the Windows NT **Server** 4.0 operating
system, Terminal Server Edition, which will offer corporate IT departments
yet another...

...of-ownership and performance objectives, Microsoft and HP are working
together to provide Windows Terminal **Server   sizing** information and
guidelines. Details on HP's scaleability analysis Windows Terminal Server
on HP NetServer...

 22/3,K/19   (Item 2 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

03834785   Supplier Number: 48328622 (USE FORMAT 7 FOR FULLTEXT)
**MATRIXONE: MatrixOne sets important new scalability/ performance benchmark
  for the PDM industry**
M2 Presswire, pN/A
March 2, 1998
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1044

...   The important results are being used by MatrixOne to provide its
customers with valuable system- **sizing** guidelines.
     The Client/ **Server** Labs test replicated the load and variety of

users that would be encoun~~ter~~d in a...

...s Northbridge NX801 for Microsoft Windows NT 4.0, Hewlett-Packard's HP
9000 K- **Class** Enterprise **Server** running HP-UX 10.0, NEC ProServaSH
running Windows NT 4.0, and Sun Microsystem...

22/3,K/20   (Item 1 from file: 16)
DIALOG(R)File   16:Gale Group PROMT(R)
(c) 2002 The Gale Group. All rts. reserv.

09201441   Supplier Number: 77930514   (USE FORMAT 7 FOR FULLTEXT)
inside IBM. (new products and alliances)
Enterprise Systems Journal, v15, n5, p9
May, 2000
Language: English   Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 918

...   on a range of servers, such as S/390, RS/6000, AS/400 and Netfinity
brand   servers . Sample configurations are available for small, medium
and large requirements with highly accurate IBM **server   sizing**
methodologies. For customers looking to implement highly scalable SAP BW
solutions, the IBM DB2 Universal...

22/3,K/21   (Item 2 from file: 16)
DIALOG(R)File   16:Gale Group PROMT(R)
(c) 2002 The Gale Group. All rts. reserv.

06058766   Supplier Number: 54841575   (USE FORMAT 7 FOR FULLTEXT)
How Big Is Big Enough? (determining the appropriate server
  configuration) (Technology Information)
Lafferty, David
Network, pNA
August 1, 1998
Language: English   Record Type: Fulltext Abstract
Document Type: Magazine/Journal; Trade
Word Count: 1895

...   of testing (for more information, see "Load Testing Tools").
    Moving Target
    There are reasons why **sizing** Windows NT **Server** configurations is
difficult. The first is that many organizations lack experience with the
performance of...

...still comparatively new and lacks an established track record for
industry- standard enterprise or workgroup **applications** , most
organizations still guess what **kind** of configuration they need and hope
they guessed right when applications go into production.
    The...

22/3,K/22   (Item 3 from file: 16)
DIALOG(R)File   16:Gale Group PROMT(R)
(c) 2002 The Gale Group. All rts. reserv.

03848306   Supplier Number: 45513086   (USE FORMAT 7 FOR FULLTEXT)
SERVERS BALANCING TASKS
Computer Reseller News, p121
May 1, 1995
Language: English   Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 1043

...   T is going to market with its 3455 and 3500 SMP servers. The 3500
can **use** up to 16 90MHz Pentium **processors** . The 3455 has eight
processors crammed into a desktop-size unit. The average selling price...

...selling price for the 3500 is $250,000. The scalable architecture will allow the right- **sizing** of the SMP **server** to the network's needs; or, with enough performance, it will act as an outright...

22/3,K/23   (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.

12805095   SUPPLIER NUMBER: 66936829   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Let the Fit revolution Begin.
DesMarteau, Kathleen
Bobbin, 42, 2, 42
Oct, 2000
ISSN: 0896-3991   LANGUAGE: English   RECORD TYPE: Fulltext
WORD COUNT: 4561   LINE COUNT: 00368

...   specializes in anthropometric research and analysis, explains that Anthrotech can map an apparel firm's **sizing** specifications onto the CAESAR **database** , and identify significant size **groups** that are not being covered and verify whether specific sizes and grade rules need to...

22/3,K/24   (Item 2 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.

10262774   SUPPLIER NUMBER: 20803389   (USE FORMAT 7 OR 9 FOR FULL TEXT)
WebStar 3.0 shines, but is it enterprise bright? (Software
   Review)(Evaluation)
Dugan, Sean
InfoWorld, v20, n23, p76(1)
June 8, 1998
DOCUMENT TYPE: Evaluation   ISSN: 0199-6649   LANGUAGE: English
RECORD TYPE: Fulltext
WORD COUNT: 722   LINE COUNT: 00059

...   WebStar gives you good control over all the things you'd expect in a Web **server** : cache **sizing** preferences, logging, MIME **types** , suffix mapping, and the number of allowed connections. You can also block connections from a...

22/3,K/25   (Item 3 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.

09150020   SUPPLIER NUMBER: 18916219   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Designing for satisfied users. (client servers)(includes related article on
   the creation of a business transaction profile)
Edlund, Albert E.; Parker, Sharon R.
Business Communications Review, v26, n11, p75(4)
Nov, 1996
ISSN: 0162-3885   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 2428   LINE COUNT: 00203

...   t answer a query. The development target was 300 users, with an objective of one **transaction** per **minute** per user and a network turnaround of less than one second. Initial **sizing** of the environment predicted the **server** would have to handle about 20 **transactions** per **second** .
     The flaw was that nobody bothered to define what a transaction looked like from a...

22/3,K/26   (Item 4 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

08667716   SUPPLIER NUMBER: 18218775   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Dodge a client-server collision. (using rapid application development
  tools) (includes table comparing the performance of Borland's Delphi,
  Sybase/Powersoft's PowerBuilder and Microsoft's Visual Basic) (Technology
  Information)
Linthicum, David S.
Government Computer News, v15, n8, p27(2)
April 15, 1996
ISSN: 0738-4300   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 1117   LINE COUNT: 00097

...   data, and the estimated user and processing load. Document these
requirements.
      * Size and select a **processor** , **operating** system and **database**
server to meet requirements. **Server   sizing** should include simulation
modeling, hardware metrics and testing on a pilot system. Many government
client...

  22/3,K/27   (Item 5 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

08010471   SUPPLIER NUMBER: 16903242   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Servers balancing tasks. (the industry trend toward symmetrical
  multiprocessing servers)(Network Hardware)
Terdoslavich, William
Computer Reseller News, n628, p121(2)
May 1, 1995
ISSN: 0893-8377   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 1103   LINE COUNT: 00089

...   T is going to market with its 3455 and 3500 SMP servers. The 3500
can **use** up to 16 90MHz Pentium **processors** . The 3455 has eight
processors crammed into a desktop-size unit. The average selling price...

...selling price for the 3500 is $250,000. The scalable architecture will
allow the right- **sizing** of the SMP **server** to the network's needs; or,
with enough performance, it will act as an outright...

  22/3,K/28   (Item 1 from file: 553)
DIALOG(R)File 553:Wilson Bus. Abs. FullText

03576174   H.W. WILSON RECORD NUMBER: BWBA97076174   (USE FORMAT 7 FOR
FULLTEXT)
Technical progress and co-invention in computing and in the uses of
  computers.
Bresnahan, Timothy
Greenstein, Shane
Brookings Papers on Economic Activity (Brook Pap Econ Act) ('96
Microeconomics) p. 1-77
LANGUAGE: English
WORD COUNT: 23177

  (USE FORMAT 7 FOR FULLTEXT)

TEXT:
...   builds new C/S applications will need new server hardware. We
discard changes to PC- **class   servers** since they are irrelevant to our
study of large-scale computer facilities, which as a...harder to detect in
the data. Second, we miss all client/server computing with PC **servers** ,
which means some "up **sizing** " of applications formerly run on personal
computers or on local area networks. While these two...

22/3,K/29   (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

02083192 62911249
CAD: Let the fit revolution begin
DesMarteau, Kathleen
Bobbin v42n2 PP: 42-56 Oct 2000
ISSN: 0896-3991 JRNL CODE: BBN
WORD COUNT: 4963

...TEXT: specializes in anthropometric research and analysis, explains that
Anthrotech can map an apparel firm's **sizing** specifications onto the
CAESAR **database** , and identify significant size **groups** that are not
being covered and verify whether specific sizes and grade rules need to...

22/3,K/30   (Item 2 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

00762616 94-12008
About databases
Parker, Kevin
Manufacturing Systems Manufacturing Execution Systems Supplement PP:
MES24 Sep 1993
ISSN: 0748-948X JRNL CODE: MFS
WORD COUNT: 630

...ABSTRACT: maintaining database accuracy. A database is a collection of
structured data files, independent of any **application** . There are several
 types of **databases** , including hierarchical and network, but an MES
typically uses relational database technology. The relational model...

... system. In addition, those that know the manufacturing process must
advise the experts choosing the **database** and **sizing** its computer
platform. For these reasons, it is important to understand something about
the relational...

22/3,K/31   (Item 3 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

00710167 93-59388
Applying simulation to network planning (part 1)
Jazwinski, Andrew; Laszakovits, Brian
Network World v10n20 PP: 33-35 May 17, 1993
ISSN: 0887-7661 JRNL CODE: NWW
WORD COUNT: 1276

...TEXT: CPU, and disk delays and utilization as a function of server CPU
power and disk **speed** (for **server** **sizing**).

* Application **transaction** response, **server** **CPU** , and disk delays and
 utilizations as a function of the number of users (for capacity
planning).

OTHER SIMULATION APPS

Simulation...

22/3,K/32   (Item 1 from file: 635)
DIALOG(R)File 635:Business Dateline(R)

0955840 99-18621
ATLANTA TECH THE PATENTS Footmark device sizes up your feet
Tharpe, Gene
Atlanta Constitution (Atlanta, GA, US) pD.07
PUBL DATE: 980624
WORD COUNT: 578
DATELINE: Atlanta, GA, US, South Atlantic

TEXT:

...he said elderly people often may fall because they are wearing the
wrong size or **type** of shoes.

"There is no **database** for **sizing** American feet and (shoe sizes) are
based on 100-year-old data determined mainly by...

22/3,K/33   (Item 1 from file: 9)
DIALOG(R)File   9:Business & Industry(R)
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01842187 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Apache:Freely Successful
(The Apache Group's Web server software is used at 42% of over 1 mil Unix
  Internet sites, according to a survey by Internet consultant Netcraft ,
  vs 14% for Microsoft and 11% for Netscape's)
Information Week, p 90
June 02, 1997
DOCUMENT TYPE: Journal ISSN: 8750-6874 (United States)
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 1560

ABSTRACT:
The Apache **Group** 's Web **server**   **software** is used at 42% of over 1 mil
Unix Internet sites, according to a survey...

...Internet and intranet servers. While Apache is not yet available for
Windows NT, the Apache **Group** plans to develop **server** **software** for the
Microsoft operating system. Although Apache is free, that doesn't explain
its popularity...

...to eight times faster than the current protocol. Also, where commercial
vendors have priorities beyond **server** **software** , the Apache **Group** is
totally devoted to making the best possible **server** . The Apache **Group**
itself is **sizing** up the Windows NT market, with plans to develop a
version of Apache for NT.   ...

22/3,K/34   (Item 1 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext
(c) 2002 CMP Media, LLC. All rts. reserv.

01213863   CMP ACCESSION NUMBER: NWC20000417S0009
The Dell PowerEdge 4400: A Departmental Powerhouse
Dave Fetters
NETWORK COMPUTING, 2000, n 1107, PG28
PUBLICATION DATE: 000417
JOURNAL CODE: NWC   LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: Sneak Previews
WORD COUNT: 888

...   servers in this market use a dual-peer PCI bus configuration.
Compared with Dell's **class** -leading enterprise **server** , the PowerEdge
6300 (see "Dell's PowerEdge 6300: Sharp Edge Over Network Connectivity " at
www...

...support. Even IBM Corp.'s Netfinity 5500 M20, the top performer in our

quad-processor **server** te⬤ (see " **Sizing** Up the Quad Squ⬤ at
www.networkcomputing.com/10⬤9/1019f2.html), doesn't have a..⬤

22/3,K/35   **(Item 2 from file: 647)**
DIALOG(R)File 647:CMP Computer Fulltext
(c) 2002 CMP Media, LLC. All rts. reserv.

01202893   CMP ACCESSION NUMBER: NWC19991018S0029
Buyer's Guide: Multiprocessor Servers
Dave Fetters
NETWORK COMPUTING, 1999, n 1021, PG136
PUBLICATION DATE: 991018
JOURNAL CODE: NWC   LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: Workshop - Servers And Peripherals
WORD COUNT: 1145

...   and two 50-GB hard drives. As seen in the results of our
quad-processor **server** tests (" **Sizing** Up the Quad Squad,"
www.networkcomputing.com/ 1019/1019f2.html), you'd quickly hit a ceiling,
with **CPU utilization** falling short of the 100 percent maximum. Using
10 10-GB drives in place of...

22/3,K/36   **(Item 3 from file: 647)**
DIALOG(R)File 647:CMP Computer Fulltext
(c) 2002 CMP Media, LLC. All rts. reserv.

01050462   CMP ACCESSION NUMBER: CRN19950501S0071
**Servers Balancing Tasks - Adding another server is no longer the approach
    to boosting netwrok power. SMP servers can already handle more than
    two jobs at once. To Add power to the network, just add another CPU
    board.** (Weekly Briefs)
William Terdoslavich
COMPUTER RESELLER NEWS, 1995, n 628, PG121
PUBLICATION DATE: 950501
JOURNAL CODE: CRN   LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: feature - Network Hardware
WORD COUNT: 993

...   T is going to market with its 3455 and 3500 SMP servers. The 3500
can **use** up to 16 90MHz Pentium **processors** . The 3455 has eight
processors crammed into a desktop-size unit. The average selling price...

...selling price for the 3500 is $250,000. The scalable architecture will
allow the right- **sizing** of the SMP **server** to the network's needs; or,
with enough performance, it will act as an outright...

22/3,K/37   **(Item 1 from file: 674)**
DIALOG(R)File 674:Computer News Fulltext
(c) 2002 IDG Communications. All rts. reserv.

084835
Letters
Byline: Readers
Journal: Network World   Page Number: 58
Publication Date: June 12, 2000
Word Count: 596   Line Count: 52

Text:
Your article " **Sizing** up LDAP **servers** " (May 15, page 78) states: "To
level the playing field, we asked all vendors to...

...already paid for twice. I didn't see the record companies rushing to put
some **sort** of rebate **program** in place to treat consumers fairly.I figure

that if anyone has bought a[lbum...

22/3,K/38   (Item 1 from file: 813)
DIALOG(R)File 813:PR Newswire
(c) 1999 PR Newswire Association Inc. All rts. reserv.

1249940   SFM004
New Intel Server Sizing White Paper Featuring Bluecurve's Dynameasure
    Illustrates How to Configure Servers to Obtain Optimal Performance

DATE: March 30, 1998   08:02 EST   WORD COUNT: 973

... March 30 /PRNewswire/ -- Bluecurve(TM), Inc. today announced that a new
Intel white paper called " **Server   Sizing** : Performance Impact of **CPU**
 and Disk on Server Capacity" **utilizes** Bluecurve's Dynameasure product to
show Intel customers the importance of configuring servers to obtain...

...Grubb, Bluecurve Vice President of Marketing. "With this piece, Intel is
providing practical approaches and **server sizing** information backed by
hard performance data to those who purchase, configure and deploy
Intel-based **servers** ."

    New **Class** of **Software** Designed for Managing Distributed Systems

    Dynameasure is not a load tester, not just a benchmark...

02303872 103219799
Using Linux to get easier
Hochmuth, Phil; Connor, Deni
Network World v19n4 PP: 1, 13 Jan 28, 2002 ISSN: 0887-7661 JRNL CODE:
NWW
DOC TYPE: Periodical; News LANGUAGE: English RECORD TYPE: Fulltext
   LENGTH: 2 Pages
WORD COUNT: 806

ABSTRACT: At   the   LinuxWorld   Conference   &   Expo,   Compaq,   Computer
Associates,   IBM,   Intel   and   Hewlett-Packard   will be among more than 100
vendors touting their wares. Red Hat, BMC Software and HP will be among the
many companies announcing services and products for helping customers
install and manage Linux systems, or to migrate to Linux servers from Unix
systems   or   proprietary   mainframe   platforms.   With   lots   of   hardware
horsepower and management products on hand, the show also will feature
vendors with plenty of applications for Linux.

TEXT: Show to feature migration, mgmt. tools.

NEW YORK - A host of bigname vendors this week will air servers and
applications aimed at handling heavier Linux workloads as well as tools for
managing what some users are calling "unwieldy" open source systems.

At   the   LinuxWorld Conference & Expo - expected by organizers to draw less
than   the   25,000   attendees   who showed for the San Francisco edition last
August - Compaq, Computer Associates, IBM, Intel and HewlettPackard will be
among more than 100 vendors touting their wares. Red Hat, BMC Software and
HP   will   be   among the many companies announcing services and products for
helping customers install and manage Linux systems, or to migrate to Linux
servers from Unix systems or proprietary mainframe platforms.

"Every year, the number of Unix systems that can be replaced by Linux
grows; says Michael Tiemann,CTO of Red Hat."First it was file and print,
then Web. Now we're well into the middle tier of enterprise servers."

Red Hat will introduce its Network Workgroup service, which includes
software that can tie together multiple Linux servers to be managed as a
group. The service also provides access to the Red Hat Network, an online
management   service   that   automates   software   updating,securityalert
monitoring and software patch distribution.

BMC is announcing eight products that will let administrators make
predeployment decisions regarding Linux server installations or migrations
from other server platforms.Among the packages are Patrol for Perform,
Patrol for Predict and Configuration Manager for Linux, all of which are
used   to   evaluate   **workload**   , capacity and underlying **hardware
 requirements** of supported **applications** . Data collected on current
systems with the BMC software could be used by businesses to help avoid
surprises when installing Linux servers for the first time or moving from
one platform to another. Such pitfalls could include performance slow-downs
under heavy loads or incompatibility with custom-built applications.

Looking to help companies devise a Linux plan, HP is launching its Global
Deployment Services for Linux. The service can help companies pick what
systems are right for migrating from Unix to a less-expensive Linux system,
and how to port applications and convert information such as user
databases, network file systems and storage, HP says.The service provides
companies with advice on where to use Linux, as well as installation,
testing and postinstallation support of Linux servers.

Kicking off several high-end Linux mainframe and clustering announcements,
IBM will roll out a Linux-only mainframe. The all-Linux mainframe could be
used to consolidate servers in a corporation, and will cost less than IBM's

traditional mainframes. Pr●ous mainframe support for ●ux involved
running Linux server images on top of a mainframe's OS/390 operating
system.

Part of BMC's multiproduct announcement will include tools for migrating
software to IBM eServer zSeries (formerly S/390) servers running Linux.
Also, Serena Software will announce IBM zSeries support for its ChangeMan
product, which manages the deployment and installation of enterprise
applications over a network.

On the clustering front, Platform Computing will announce its Clusterware
for Linux, an installation, configuration and management package for Linux
clusters. Clusterware lets system managers allocate resources such as CPU
utilization, monitor and configure workloads, and measure the performance
of the cluster.

With lots of hardware horsepower and management products on hand, the show
also will feature vendors with plenty of applications for Linux.

"In this day and age, if you are a software company and you are serious
about it, you are making provisions to support Linux? says Evan Quinn, an
analyst with Hurwitz Group. This is a different story from a few years ago,
when one of the biggest knocks on Linux was the lack of application
support.

Sun will announce that its iPlanet Application Server, an e-commerce
development platform, will work on Linux servers.

CA will announce that its ACCPAC accounting system for midsize to large
corporations has been ported to the IBM DB2 database for Linux.

Jim Kirwan,an IT consultant, has installed ACCPAC on Red Hat Linux in
telecom company Future Communications' offices, where more than 45 local
and remote employees will access it and send mission-critical financial
information from their pointof-sale systems. Kirwan, who has no previous
experience with Linux, says Future chose Linux because it was inexpensive
for cost-conscious retail environments to implement and easy to install.

Linux desktop company Ximian will be showing its latest Evolution desktop
environment for Linux,which provides a graphical user interface as well as
management tools and software-updating tools.

While interest in Linux on the desktop has lagged compared with the server
version of the operating system, it has garnered some attention.
"My plan is to configure [our] workstalions so that all Internet
applications will run under Linux for security reasons;'says Robert Cole,
system administrator at Zila Pharmaceuticals in Phoenix, which uses
Ximian's desktop products. Cole expects to see fewer viruses on Linux
because most malicious programs are Windowsbased.

Get more information online.

DocFinder: 7857

www.nwfusion.com

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GEOGRAPHIC NAMES: United States; US

DESCRIPTORS: Trade shows; Linux; Open source software; Manycompanies
CLASSIFICATION CODES: 9190 (CN=United States); 7300 (CN=Sales & selling);
   5240 (CN=Software & systems)
PRINT MEDIA ID: 15378

 25/9/38   (Item 6 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

ABSTRACT: Workload forecasting for **client** /server does not **require** any
particular new insights over **workload** forecasting for traditional legacy
systems. Whether mainframe or client/server, the mechanisms used to map
business growth to workload growth, are very much the same - finding the
trends and cycles exhibited in historical data. Bernie Domanski pointed out
in a session at the 1994 CMG conference that some capacity questions that
workload characterization must address for these client/server environments
include: 1. What server should each workload be placed on? 2. Which
workloads can and cannot be mixed on servers? 3. What hardware is needed to
maintain service in the face of workload growth? 4. How many more users can
existing servers support? 5. If the number of transactions increases by n%,
what will that do to server utilization? The questions relating to
placement and mixture of workloads on servers are new. These questions
cannot be answered without doing some kind of modeling, whether it be
discrete event simulation, analytic queuing modeling or statistical
modeling.

TEXT: In many respects, capacity planning in the client/server world is not
that much different from the capacity planning that we have become quite
good at for mainframe systems. The whole idea of workload forecasting and
characterization, for example, is very similar. Workload forecasting for
client /server does not **require** any particular new insights over
workload forecasting for traditional legacy systems. Whether mainframe or
client/server, the mechanisms used to map business growth to workload
growth, are very much the same finding the trends and cycles exhibited in
historical data.

As Dr. Bernie Domanski pointed out in a session at the 1994 CMG conference,
some capacity questions that workload characterization must address for
these C/S environments include:

* What server do I place each workload on?

* Which workloads can and cannot be mixed on servers?
* What hardware is needed to maintain service in the face of workload
growth?

* How many more users can existing servers support?

* If the number of transactions increases by n %, what will that do to
server utilization?

These questions are basically the same as we would ask for mainframes.
However, the ones relating to placement and mixture of workloads on servers
are new. In either case, we cannot answer those questions without doing
some kind of modeling, whether it be discrete event simulation, analytic
queuing: modeling, or statistical modeling.

Measurement and modeling tools. Although the toolset is not nearly as
advanced and sophisticated as the toolset for mainframes, there are 39
products listed under "Modeling and Simulation" in the Institute's 1994
report, Client/Server Performance and Capacity Planning. Many of them are
limited in scope, but the sheer number is an indication that the field is
maturing. Typically, only large servers are modeled as if they were
traditional mainframe systems. When modeling tools ignore clients and
networks, expect only limited accuracy.
Still, coming up with basic modeling inputs without the right measurement
sources is difficult, and this is one key problem in UNIX and

client/server. While mainfra●s are used to rich measurement ●rces (e.g., SMF and RMF in the IBM MVS environment), no sets of comparable measurements exist in the client/server world.

The curious thing is that the measurements needed are basically the same as those needed for mainframe systems: CPU utilization, I/O activity, memory usage, etc. The main difference is that these are needed for both clients and servers and should be further supplemented with what Domanski calls "locality metrics" that get at questions like: "Where did the running process execute?" and, "Where is the accessed data located?"

Depending: on the specific operating system, metrics may be marginal to nonexistent. UNIX systems provide metrics from specific sources like iostat, vmstat, and sar, but these are not really adequate. Domanski points out that a package like Hewlett-Packard's Performance Collection Software (PCS) is richer than other measurement sources, but because it is a commercial product it is not always available and is certainly not a standard.

Working with transactions.
When we talk about client/server systems, we are inevitably led to UNIX, the platform supporting the notion of so-called open systems. One underlying difficulty of UNIX capacity planning is the fact that the transaction is not a defined entity in UNIX. Speaking at the 1995 CMG conference, Julius Bleker, of IBM Corp., pointed out that UNIX maintains information internally by process, not by transaction. Thus, there are no transaction counts, transaction resource consumption figures, or response times. The applications themselves could keep track of transaction-based information, but they seldom do.

Characterizing resource utilization and response time in terms of transactions is a constructive fundamental to modeling techniques. It is up to the capacity planner, says Bleker, to define the transactions and workloads using the process information available from the operating system and/or any other information that can be extracted from the applications themselves. Since resource consumption information is maintained at the process level, the capacity planner must map the process information into transaction information, if it can be determined what processes are involved in the execution of a transaction.

The problem is that often there is no clear mapping of processes to transactions. A single process can map to a single transaction type, or a single process can map to multiple transaction types, or multiple processes can map to a single transaction type, etc. Four situations are displayed in Figure 1.

(1) Single process maps to a single transaction. This is naturally the simplest situation and applies to many systems administration and programming activities using commands such as ls , grep, find, and cd. Even some longer running commands such as cc and tar can fall in this category.

(2) Single process maps to multiple transactions. An example here might be the use of the vi editor. In a typical user session running the editor, all the resource consumption is accounted for at the level of the process. A user has only one process associated with all the activity, but the session consists of multiple transactions.

Here, about the best that can be done is to divide the total resource consumption accumulated for the process by the transaction count to give an average resource consumption for each transaction. One overriding problem still exists, however, and that is getting the transaction count. Some external counting mechanism is needed.

(3) Multiple processes map to a single transaction or multiple transactions of a single type. Examples might include a process that spawns another process, or shell scripts, or two commands connected by pipe. This is similar to case 1, except that the resource consumption of all the processes must be summed to give the transaction resource consumption. If

multiple transactions are ●nvolved, then an average sho● be computed based on the (external) count of transactions.

(4) Single process maps to multiple transaction types. This is the most difficult case of all. Because of the multiple transaction types, the resource consumption data cannot be averaged. Unfortunately, this is common in UNIX systems, including most RDBMS systems. Typical RDBMS systems have a few client processes for each user to handle interface and front-end processing, plus one or a few processes to handle database processing for all users. The front-end and back-end processes might even reside on different nodes. In trying to develop resource utilization data by transaction type to be used in modeling, one solution is to have users execute only a single transaction type at a time while monitoring resource consumption. In this way, resource consumption can be computed for the specific transaction without interference from other transactions. This is OK in a test or experimental environment to establish a workload characterization baseline, but would not be acceptable in a production environment.
Bleker also suggests that a linear algebra solution is available solving two equations with two unknowns. For example, the two equations may be constructed as follows if there is a single process mapped to two transaction types, the number of each type of transaction is collected for a time period, along with the total CPU process time for each period:

$$(A_1 * CPU_A) + (B_1 * CPU_B) = CPU_1$$

$$(A_2 * CPU_A) + (B_2 * CPU_B) = CPU_2$$

where:

A_1 = Number of type A transaction, period 1

A_2 = Number of type A transaction, period 2

CPU_A = CPU consumed per transaction A

CPU_B = CPU consumed per transaction B

CPU_1 and CPU_2 = Total CPU consumed during period.
A_1, B_2, and CPU_1 and CPU_2 are known for each time period. Since there are two equations, the two unknowns (CPU_A and CPU_B) can be computed. The method can be extended for situations where there are more than two transaction types, by measuring more time periods.

Modeling Disk I/O.

Since disk I/O is such an important part of the overall capacity planning process, understanding how UNIX handles disk I/O is necessary if it is to be modeled properly. In UNIX, most reads are handled synchronously and most writes asynchronously using a lazy write process. When a process does a disk I/O, the process is suspended, or put to sleep, and is not made executable again until the read is completed. With a write command, the write is placed in a write queue, the process continues executing, and the data is written to disk later.

From a modeling perspective, this means that reads should be considered as a part of response time, but not writes. Of course, exceptions to this rule exist. There are cases where the user can specify synchronous writes in which case they must also be considered as a part of response time. To defeat lazy write and ensure that critical data is in fact written to disk, UNIX database applications invoke fflush to Mite data synchronously. A database Commit is often implemented using fflush. When synchronous write activity occurs, it is necessary to include Write I/O delays in a transactions resource profile. Even when it is inaccurate to include Write I/O delay into transaction-oriented models, it is unsafe to ignore this category of disk activity entirely. By design, lazy write tries to perform disk updates during idle time. Suppose the disk is seldom idle. Although scheduled asynchronously, Write I/Os are still scheduled and often need to

be represented in an accurate model of the physical disk or disks.

Some versions of UNIX have an asynchronous I/O subsystem giving the user the option of doing asynchronous reads. From the individual user perspective, however, even an asynchronous read will be experienced as a synchronous read by the user. The user will not get the desired response until the read has been satisfied.

NFS considerations. The Network File System (NFS) is used extensively in the UNIX community so it is important to capacity planning. NFS operates in a client/server mode where the seer manages the file system and clients request data from it. Possible bottlenecks exist including the client system, the network, network adapters, the server RAM and CPU, and the server disk. The server disk is the most common bottleneck.
Both reads and writes are performed synchronously under NFS so both must be included in response times (unless an NFS accelerator is configured which essentially simulates asynchronous writes). The capacity planner must also be aware of the daemon processes that handle NFS requests (nfsd on the server, biod on the client). Accordingly there are constraints on each of these that effectively act as governors on total NFS activity. For example, biod's can only have a single I/O outstanding on a server; an nfsd can only handle one request at a time. Therefore, the number of biod's and nfsd's can become a logical performance bottleneck and need to be represented in a model.

The capacity planner also has to be aware of whether a UNIX system has disk mirroring, used to increase data availability and reliability. The effect of mirroring on performance is as follows: the number of writes is multiplied by the number of mirror copies; the number of reads remains the same, but can be distributed across all the disks, possibly improving performance.

Background and foreground processes.

UNIX does not treat batch processing in the same sense as mainframes do. In UNIX, cron jobs are usually considered batches. Cron is a scheduling facility that runs a task automatically at some prescheduled time, for example a database backup at night. Cron jobs are not treated any differently than any other process, however, and compete on an equal basis with other processes for system resources. The capacity planner must be aware of when cron jobs are to be run so that they can be included in the overall workload.

Certain processes are run under UNIX in a background mode with lower priority (large NICE values) and are often considered as batch work. They do not compete on an equal basis with other processes and will take longer to run than a process not in the background. The capacity planner must make allowance for these background processes in the modeling tool.

Capacity planners should also be careful of applications that poll for useful work. They consume CPU, RAM, and even network resources just looking for work to do. Performance analysts familiar with the so-called "low utilization" effect should be familiar with this topic. Polling leads to more response-oriented systems, but plays havoc with utilization statistics when the system is lightly loaded. The overhead associated with polling diminishes as the system begins to saturate. If resource consumption appears to decrease as the volume of work increases, you may be observing the effects of polling. Some application vendors use this technique.
Summary.

Many mainframe users have capacity planning functions in place that would probably be considered mature according to Pat Artis' model of organization's capacity planning efforts. In contrast, most client/server capacity planning efforts are still in the vendor stage.

Capacity planning itself is going through a reengineering process, says Domanski. "We need a broader focus with less precision," he says, to better understand how to grow client/server applications.

25/3,K/1 **(Item 1 from ⬤e: 275)**
DIALOG(R)File 275:Gale Group Computer DB(TM)
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02509719   SUPPLIER NUMBER: 75433330   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Linux: the ideal client/server link.(Technology Information)
Tiemann, Michael
Electronic Engineering Times, 102
June 11, 2001
ISSN: 0192-1541   LANGUAGE: English   RECORD TYPE: Fulltext
WORD COUNT: 2186   LINE COUNT: 00182

...   the operating system of the connected world must scale. It must
scale down to minimal **configurations** on esoteric **hardware** , and scale up
to handle high- **demand** transactional **workloads** on SMP **servers** .
    This is possible only through a consistent API or a hierarchical set
of APIs, and...

25/3,K/2   **(Item 2 from file: 275)**
DIALOG(R)File 275:Gale Group Computer DB(TM)
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02290590   SUPPLIER NUMBER: 54467014   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Amdahl's Multi-Server Feature.(Product Information)(Brief Article)
Enterprise Systems Journal, 14, 4, 18(1)
April, 1999
DOCUMENT TYPE: Brief Article   ISSN: 1053-6566   LANGUAGE: English
RECORD TYPE: Fulltext
WORD COUNT: 159   LINE COUNT: 00016

    Amdahl provides a single-frame computer with up to four separately
serialed computers within. ISV **software** can be licensed to the individual
computers so customers pay fees only on **software** **necessary** to run a
specific **workload** -- rather than paying based on the total capacity of
all the servers in the frame...

25/3,K/3   **(Item 3 from file: 275)**
DIALOG(R)File 275:Gale Group Computer DB(TM)
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02010296   SUPPLIER NUMBER: 18855021   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Enterprise computing platform evolution: technology trends change as fast
  as fashion styles.(major trends through the history of client/server)
  (Technology Information)(Technical)
Toigo, Jon William
Enterprise Systems Journal, v11, n10, p54(4)
Oct, 1996
DOCUMENT TYPE: Technical   ISSN: 1053-6566   LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 3543   LINE COUNT: 00306

...   of mainframe-style platform management, began to show as a new
class of three-tier **client / server** systems with high transaction
workload **demands** began to come on-line.
    "Big systems management companies went through a lot of pain...

25/3,K/4   **(Item 4 from file: 275)**
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01931223   SUPPLIER NUMBER: 18198683   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Benchmarks highlight RISC performance. (TPC-C ratings released for
  PowerPC-based IBM AS/400 servers) (Product Information)
Lardear, Jim
MIDRANGE Systems, v9, n5, p1(2)

April 12, 1996
ISSN: 1041-8237   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 577   LINE COUNT: 00047

...   Unlike TPC-C, which mainly tests OLTP performance with dumb
terminals, the RPmark95 is a **client** /server benchmark that **requires**   **PCs**
to run three different **workloads** -- file, decision support and OLTP.
     Unix vendors typically embrace TPC-C, while steering clear of...

 25/3,K/5   (Item 5 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01852422   SUPPLIER NUMBER: 17603043   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Capacity management for client/server architectures.
Domanski, Bernard
Enterprise Systems Journal, v10, n9, p30(7)
Sep, 1995
ISSN: 1053-6566   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 3415   LINE COUNT: 00301

...ABSTRACT: techniques, including statistical forecasting, simulation and
benchmarking. A thorough capacity management analysis will determine what
hardware and software will be **required** to support a given **workload** .
The process, then, first **requires** the analyst to identify the composition
of the workload, and through historical data, to predict...
...   estimates by statistically analyzing historical trend information
and generating workload forecasts. Understanding workload forecasting for
client /server systems does not **require** any new insight over
understanding **workload** forecasting for traditional legacy systems. The
problem is essentially the same: to find the trends...

 25/3,K/6   (Item 6 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01621542   SUPPLIER NUMBER: 14429152   (USE FORMAT 7 OR 9 FOR FULL TEXT)
"Right sizing" the Information Systems, or any other, organization.
   (information strategy planning)
Davis, Richard K.
Journal of Systems Management, v44, n10, p30(7)
Oct, 1993
ISSN: 0022-4839   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2092   LINE COUNT: 00178

...   is processed, the current system satisfaction tells you how well
current systems meet the user **needs** , and the function **workload** chart
tells you what **needs** processing support given the effectiveness of
current systems. By studying the workload patterns, it is...

...themselves to work station processing since the workloads are so small,
unless, of course, the **workloads**   **demand** access to central (or remote)
database   **machines** .
     B. Communications **Configurations**
     After determining the possible processing locations, tradeoffs may be
made based on the communications bandwidths...

 25/3,K/7   (Item 7 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01530975   SUPPLIER NUMBER: 12463236   (USE FORMAT 7 OR 9 FOR FULL TEXT)
PCB design software. (printed circuit board design software) (Buyers Guide)
Foster, Alan
Cadcam, v11, n7, p45(3)

...ABSTRACT: circuit board (PCB) computer-aided design (CAD) software
package should address such issues as expected **work** load and **application**
  requirements , system compatibility, host **hardware** , **software**
functionality and ease of installation, documentation and support. PCB
software packages range from less than...

25/3,K/8   (Item 8 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01527396   SUPPLIER NUMBER: 12435755   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Rightsizing: redistributing the electronic workload.
Ehrenreich, Doug
Telecommunications, v26, n6, p59(3)
June, 1992
ISSN: 0278-4831   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2284   LINE COUNT: 00191

...   can be redistributed through an existing network of computing
systems. This latter example, known as **client - server** computing, does
not imply or **require** the sacrifice of existing **computers** . It simply
means realigning the **workload** to match the user's **needs** .
      Client - server computing has become a buzzword that now means many
things to many people, so a...

25/3,K/9   (Item 9 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01503468   SUPPLIER NUMBER: 11947885   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Stocking your PCB toolkit. (printed circuit board) (Column)
Gabay, Jon
Computer Design, v31, n1, p123(3)
Jan, 1992
DOCUMENT TYPE: Column   ISSN: 0010-4566   LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1988   LINE COUNT: 00159

...   you need, the more you pay to buy, install, maintain, and upgrade.
Graphing user performance **requirements** against **workload** , a design
manager can identify the best choice of hardware platform. If you average
only one new board design a week, it's hard to justify a high-end,
expensive **hardware / software** platform unless special **needs** dictate it.
By the same token, if you generate several board per day, it may...

25/3,K/10   (Item 10 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01416176   SUPPLIER NUMBER: 09766263   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Downsizing saves more than just dollars when it's done right.
Nicholls, Brian
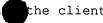Computing Canada, v17, n1, p14(2)
Jan 3, 1991
ISSN: 0319-0161   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1304   LINE COUNT: 00103

...   days is "client-server." The client-server concept is simply a
method for splitting the **workload demands** placed on **computers** by
application systems.

The work is split bet⬤n the PC the user is working a⬤he client
...

01380306   SUPPLIER NUMBER: 08714994   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Why CASE should extend into software performance. (computer-aided software
    engineering)**
Smith, Connie U.; Williams, Lloyd G.
Software Magazine, v10, n9, p49(8)
July, 1990
ISSN: 0897-8085   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 4601   LINE COUNT: 00394

...   to characterize workloads and calibrate the model to match existing
performance metrics. They examine future **needs** by using forecasts of
future workload volumes and resource **requirements** , and study **hardware
configurations** that will satisfy those **needs** .
    Initial **applications** of SPE supplemented capacity planners'
measurements of existing workloads with models of new software in...

01317863   SUPPLIER NUMBER: 07948862   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Compaq's EISA PC – multi-processor units. (Hardware Review) (Extended
    Industry Standard Architecture) (evaluation)**
Which Computer?, p22(1)
Dec, 1989
DOCUMENT TYPE: evaluation   ISSN: 0140-3435   LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 646   LINE COUNT: 00050

...   in processors allows the upgrading of hardware as the number of
users or the power **demands** of the departmental **workload** increase. The
vicious circle of having to replace hardware as **requirements** change is
broken.
    Further, the **operating** system **software** needed to help these new
powerful server machines will be available simultaneously. Versions of the
...

01241379   SUPPLIER NUMBER: 06270727   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Does DEC MicroVAX 3000 outdo IBM's 9370?
Fertig, Robert T.
MIS Week, v9, n1, p10(2)
Jan 4, 1988
ISSN: 0199-8838   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1611   LINE COUNT: 00128

...   the final analysis, user requirements in terms of the number of
active users, response time **needs** , processing **work**   **load** , etc., should
determine the **hardware / software**   **configuration** and resulting
price/performance differences. The vendors should not select only one or a
few...

...configurations and then attempt to form a conclusion which is usually
biased. A range of **hardware / software**   **configurations** and benchmarks
must be developed that represent the real world environment. Only then can

25/3,K/14   (Item 14 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01212363   SUPPLIER NUMBER: 04617792   (USE FORMAT 7 OR 9 FOR FULL TEXT)
NetWare buries IBM PC network in speed tests. (PC Week Connectivity
  supplement)
PC Week, v4, n3, pC1(5)
Jan 20, 1987
ISSN: 0740-1604   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 3401   LINE COUNT: 00273

...   Innovative Software, of Lenexa, Kan., was used to run the actual
performance tests under varying **application** and **workload** environments.
The test **software** **requires** one **workstation** on the network to be a
test control station; other workstations run the simulated workload...

25/3,K/15   (Item 15 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01040951   SUPPLIER NUMBER: 00570277
Computerized Directory Assistance System Allows GSA to Locate Government
  Employees.
Communications News, v20, n2, p37
Feb., 1983
ISSN: 0010-3632   LANGUAGE: ENGLISH   RECORD TYPE: ABSTRACT

...ABSTRACT: agency recently decided that an automated directory
assistance system was needed to handle the increasing **workload** and data
base **requirements** . After Requests for Bids were offered to commercial
suppliers capable of providing such a system...

...the company provided the agency with three supervisors, four update
clerks, regular system maintenance, documentation, **operating** training,
and all **software** **required** for the system. Each operator CRT is designed
to provide quick access to the data...

25/3,K/16   (Item 1 from file: 583)
DIALOG(R)File 583:Gale Group Globalbase(TM)
(c) 2002 The Gale Group. All rts. reserv.

06421623
Atk:n pUivitys 2000-luvulle nielee miljardeja markkoja
   FINLAND: STEEP COST OF UPDATING COMPUTER SYSTEMS
Helsingin Sanomat (XFB)   24 Jan 1997 p.A5
Language: FINNISH

As the turn of the millennium, it is crucial to make the **necessary**
 adjustments in the updating systems of **computer** **software** in good time
to enable the systems to handle data from the year 2000 onwards...

... forecasts that the combination of the year 2000 and the introduction of
the euro will **require** such a huge **work** **load** that there will be
shortage of computer specialists in Europe. A representative of the
Ministry...

25/3,K/17   (Item 1 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)
(c) 2002 The Gale group. All rts. reserv.

02949329   SUPPLIER NUMBER: 04620338   (USE FORMAT 7 OR 9 FOR FULL TEXT)

NetWare buries IBM PC netwo⬤in speed tests. (computer netw⬤)
PC Week, v4, pC1(3)
Jan 20, 1987
LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT
WORD COUNT: 3401   LINE COUNT: 00273

...   Innovative Software, of Lenexa, Kan., was used to run the actual
performance tests under varying **application** and **workload** environments.
The test **software** **requires** one **workstation** on the network to be a
test control station; other workstations run the simulated workload...

 25/3,K/18   (Item 1 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2002 The Gale Group. All rts. reserv.

02940971   Supplier Number: 76693285   (USE FORMAT 7 FOR FULLTEXT)
VMware Launches Virtualization Software for Windows-Based Intel Servers.
PR Newswire, pNA
July 23, 2001
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1115

...   Server significantly increases the options available to IT managers
who want to use industry-standard **hardware** for applications that **require**
 similar **workload** management capabilities, such as server consolidation
or high-end service provider environments."
        Rapid customer acceptance...

 25/3,K/19   (Item 2 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2002 The Gale Group. All rts. reserv.

02748967   Supplier Number: 67579212   (USE FORMAT 7 FOR FULLTEXT)
VMware Enables Intel Server Customers to Scale Their Internet Computing
  Infrastructures Safely, Reliably, and On Demand.
PR Newswire, pNA
Dec 5, 2000
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1475

...   in server environments can:
        Consolidate Servers
        Because many virtual machines can run on a single **server** , the
number of computers **required** to perform the same **workload** is
dramatically reduced. This saves on hardware costs, floor space, and IT
fixed skills costs...

 25/3,K/20   (Item 3 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2002 The Gale Group. All rts. reserv.

02639226   Supplier Number: 65158645   (USE FORMAT 7 FOR FULLTEXT)
Dialogic Showcases Building Block Solutions for Next-Generation Services At
  Fall VON 2000; Advanced, Speech-Enabled Services Take Center Stage in
  Atlanta.
Business Wire, p2314
Sept 12, 2000
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 476

...   an integrated feature on its voice processing platforms, Dialogic
is unique in reducing host-based **workload** without **requiring** additional

hardware . The enhanced technology also enables **application** to recognize voice commands more accurately, making them easier to use and increasing customer satisfaction...

25/3,K/21   (Item 4 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2002 The Gale Group. All rts. reserv.

02582054   Supplier Number: 63629788   (USE FORMAT 7 FOR FULLTEXT)
**IDC Expects Strong Shipment Growth but Flat Revenues in the Market for
  Server Operating Environments.**
PR Newswire, p5573
July 24, 2000
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 570

...   The need to support Internet and ecommerce applications as well as traditional online transaction processing, **database** , file print, and **application   workloads** will drive **demand** for **server   operating** environments.
      According to IDC, the big news in the server operating environment market is the...

25/3,K/22   (Item 5 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2002 The Gale Group. All rts. reserv.

02509532   Supplier Number: 62284404   (USE FORMAT 7 FOR FULLTEXT)
**Intel Introduces New Technology to Advance Speech-Based Web Access; New
  Continuous Speech Processing Technology Enables Voice Portals.**
Business Wire, p1348
May 24, 2000
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 767

...   an integrated feature on its voice processing platforms, Dialogic is unique in reducing host-based **workload** without **requiring** additional **hardware** . The enhanced technology also enables **applications** to recognize voice commands more accurately, making them easier to use and increasing customer satisfaction...

25/3,K/23   (Item 6 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2002 The Gale Group. All rts. reserv.

01140971   Supplier Number: 41270280   (USE FORMAT 7 FOR FULLTEXT)
**BOEING HELICOPTERS USES GROUP TECHNOLOGY SOFTWARE TO IMPROVE COMPOSITE
  PARTS DESIGN, REDUCE COSTS**
News Release, p1
April 9, 1990
Language: English   Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 663

...   manufacturing information. Part features, feature
      relationships -- and such production data as current and future
      production **requirements** , production **equipment** and **workload**
programs ,
      part operation routings, machine load information, weight, and cost
      amounts -- are contained within each data...

25/3,K/24   (Item 7 from file: 621)

01033638   Supplier Number: 39970800   (USE FORMAT 7 FOR FULLTEXT)
**DIGITAL PRODUCTS UNVEILS PRINTDIRECTOR 6 FAMILY OF INTELLINGENT BUFFERED
  DATA SWITCHES FOR LOW-COST LASER PRINTER SHARING**
PR Newswire, pN/A
Feb 18, 1987
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 805

...   added that intelligent switches available to date do not
    provide distributed printing features users now **require** for higher
    work   load   applications .

    " **PC** users want to select a variety of printers from a menu, and they
    want the...

 25/3,K/25   (Item 1 from file: 636)

05126048   Supplier Number: 78637243   (USE FORMAT 7 FOR FULLTEXT)
CAVEAT EMPTOR.(Intel's new Pentium 4 microprocessor)
Computer Aided Design Report, pNA
May, 2001
Language: English   Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 3072

...   a new microarchitecture," asserts George Alfs, the Pentium 4
product manager, in an e-mail. " **Software   needs** to take advantage of the
new **hardware** we have put in place." Alfs says customers already will see
"huge boosts in performance...robust 3.2 gigabytes per second. Even when
not refined for the architecture, Alfs claims, **workloads** that **require**
the movement of lots of data between the CPU and memory "will also scale
very...

 25/3,K/26   (Item 2 from file: 636)

04094257   Supplier Number: 53892107   (USE FORMAT 7 FOR FULLTEXT)
AMDAHL: Amdahl innovations help customers save time and money.
M2 Presswire, pNA
Feb 16, 1999
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 893

...   is providing a single-frame computer with up to four separately
serialed computers within. ISV **software** can be licensed to the individual
computers so customers pay fees only on **software   necessary** to run a
specific **workload** - rather than paying based on the total capacity of all
the servers in the frame...

 25/3,K/27   (Item 3 from file: 636)

01252505   Supplier Number: 41319970   (USE FORMAT 7 FOR FULLTEXT)
**Boeing Helicopters Using Group Technology Software To Improve Composite
  Parts Design**
CIMWEEK, v3, n12, pN/A

May 7, 1990
Language: English   Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 598

...   manufacturing information. Part features, feature relationships --
and such production data as current and future production **requirements** ,
production **equipment** and **workload** **programs** , part operation routings,
machine load information, weight, and cost amounts -- are contained within
each data...

 25/3,K/28   (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2002 The Gale Group. All rts. reserv.

03496719   Supplier Number: 44891648   (USE FORMAT 7 FOR FULLTEXT)
Clocking Client/Server Performance
Network Computing, p73
August 1, 1994
Language: English   Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 1338

...   some enterprising company.
    Of course, none of these benchmarks is likely to test your specific
client / server **workload** and functionality **requirements** . Instead of
trying to interpret irrelevant benchmark data, consider 'rolling your own.'
You need to...

 25/3,K/29   (Item 1 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01788284
IRWIN EXPANDS TAPE BACKUP NETWORKING CAPABILITIES
News Release   September 9, 1987   p. 1

    ... follow help screens, and EzStart (TM) automatic backup initiation.
Multi-user backup and network bridging. **Workload**   volumes or system
 requirements   may dictate that each workstation in a LAN be equipped with
its own backup system...

...same LAN. To back up selected files, the user routes these files through
the network   **server** 's hard disk to the designated backup **workstation** .
EzTape **software**   fully supports LANS which are **configured**   with Novell
Advanced Netware's "network bridging" in which multiple servers are used.
    Full text...

 25/3,K/30   (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.

12134916   SUPPLIER NUMBER: 60120045   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Transport of Men and Materials.
Hindle, Dave
World Tunnelling, 13, 1, 41
Jan, 2000
LANGUAGE: English   RECORD TYPE: Fulltext
WORD COUNT: 3703   LINE COUNT: 00323

...   most hard rock and tunnelling applications in either standard
production models, and are available for **applications** **requiring** special
design.
    Mining **Equipment** Inc. provides a wide range of remanufactured
tunnelling and mining equipment specialising in locomotives and...

...cycle time is not restricted by having an inadequate haulage system. The size of locomotives **required** for given **workloads** is calculated from the loads, gradients and other track configurations that are specified, after which...

25/3,K/31   (Item 2 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.

06497987   SUPPLIER NUMBER: 14152862   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Disaster management: hot news in hot site selection. (includes related article)
Foster, Al
Security Management, v37, n4, p65(8)
April, 1993
ISSN: 0145-9406   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 5162   LINE COUNT: 00413

...   team is crucial to the success of the project. It should be no larger than **necessary** to complete the associated **work   load** ; however, it is vital that the people chosen be highly competent and knowledgeable in project management of **computer   hardware** performance and capacity **requirements** , network **hardware** performance and capacity **requirements** , network protocols, **operating** systems **requirements** , **application software   requirements** , facilities and environmental requirements, and technical staffing requirements for the hot site team.
      Once the...

25/3,K/32   (Item 3 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.

05135869   SUPPLIER NUMBER: 10423558   (USE FORMAT 7 OR 9 FOR FULL TEXT)
How to put computers to work in the CPA office: new trends in software and hardware are making technology user-friendly.
Zarowin, Stanley
Journal of Accountancy, 171, n2, 46(6)
Feb, 1991
ISSN: 0021-8448   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT
WORD COUNT: 4255   LINE COUNT: 00319

...   be performed simultaneously, if needed. That's called multitasking.
      For Windows to manage this heavy **work** load, it **needs** both added **software** and **hardware** . Most major **software** developers, recognizing that Windows is the wave of the future-or at least the next...

25/3,K/33   (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

02303872 103219799
Using Linux to get easier
Hochmuth, Phil; Connor, Deni
Network World v19n4 PP: 1, 13 Jan 28, 2002
ISSN: 0887-7661 JRNL CODE: NWW
WORD COUNT: 806

...TEXT: Patrol for Predict and Configuration Manager for Linux, all of which are used to evaluate **workload** , capacity and underlying **hardware requirements** of supported **applications** . Data collected on current systems with the BMC software could be used by businesses to...

25/3,K/34   (Item 2 from file: 15)

01968272 47697923
Taxed to the max
Liebmann, Lenny
Informationweek n767 PP: 61-64 Jan 3, 2000
ISSN: 8750-6874 JRNL CODE: IWK
WORD COUNT: 2443

ABSTRACT: E-business is having a radical impact on business data centers.
Round-the-clock **workloads** **require** new architectures and active
management only thought about in the past. Systems and servers are rapidly
proliferating as Web contingencies place greater **demands** on traditional
IT infrastructures. The **demands** on **devices** acting as Web **servers** ,
 application **servers** , content servers, firewalls, load balancers, and
storage systems are greater than ever. The need to...

   25/3,K/35   (Item 3 from file: 15)

01496881 01-47869
A ring of servers: R/3 system has a new workhorse in IBM's S/390
Anonymous
Manufacturing Systems v15n3 PP: 28 Mar 1997
ISSN: 0748-948X JRNL CODE: MFS
WORD COUNT: 575

...TEXT: enterprise applications. Using the availability of S/390 and the
DB2 for OS/390 relational **database** , users can meet various **application**
 needs and transaction **workloads** . They have an **operating** system
capable of supporting tens of thousands of transactions per minute, by tens
of thousands...

   25/3,K/36   (Item 4 from file: 15)

01189418 98-38813
**Client/server capacity planning and hardware resource usage metrics,
trends, and relationships**
Major, Joe
Capacity Management Review v24n2 PP: 3-9 Feb 1996
ISSN: 0091-7206 JRNL CODE: PPR
WORD COUNT: 4620

...TEXT: I/O access density is 15/3 = 5. This is quite normal for 1995
vintage **Client / Server** systems. The **workload** growth will **necessitate**
another 2 gigabytes of disk storage, you are told. You calculate the new AD
and...

...16 to 81), and looks about right. Scenario 2 Same platform as today, add
new **applications** to current load Estimating **hardware** resource
 requirements of new **applications** has never been particularly easy. The
capacity planner would involve the application and data designers...

... Together, they would try to size the processing, disk I/O, memory and
disk storage **requirements** of the average **workload** unit (transaction) of
the new application mix. Workload unit volume estimates would come from
marketing...

   25/3,K/37   (Item 5 from file: 15)

01146311   97-95705
Business simulations: The next step in management training
Cadotte, Ernest R
Selections   PP: 8-15+   Autumn 1995
ISSN: 0882-0228   JRNL CODE: SEL
WORD COUNT: 4795

...TEXT: or countermoves.

Business   simulations have only lately begun to reach their full potential.
Until recently, **hardware** constraints, software-design **requirements** , and
student   **work** - **load**   considerations   limited   the depth and breadth of
decision making that could be modeled. New developments...

 25/3,K/38   **(Item 6 from file: 15)**   ·
DIALOG(R)File   15:ABI/Inform(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

01134045   97-83439
Client/server and workload characterization
Howard, Phil
Capacity Management Review   v23n10   PP: 17-22   Oct 1995
ISSN: 0091-7206   JRNL CODE: PPR
WORD COUNT: 2208

ABSTRACT: Workload   forecasting   for   **client** /server does not   **require**   any
particular   new insights over   **workload**   forecasting for traditional legacy
systems.   Whether mainframe or client/server, the mechanisms used to map...
...TEXT: whole   idea   of   workload   forecasting   and characterization, for
example, is very similar. Workload forecasting for   **client** /server does not
 require   any   particular   new   insights   over   **workload**   forecasting for
traditional   legacy   systems.   Whether   mainframe   or   client/server,   the
mechanisms used to map...

 25/3,K/39   **(Item 7 from file: 15)**
DIALOG(R)File   15:ABI/Inform(R)
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00744039   93-93260
Turf wars: Records management vs. data processing
Gable, Julie
Records Management Quarterly   v27n3   PP: 18-21+   Jul 1993
ISSN: 1050-2343   JRNL CODE: RMQ
WORD COUNT: 3183

...TEXT: and   analysis that may have taken weeks or months; similarly, the
coding   for   a   new   **computer**   **program**   occurs only after   **requirements**
analysis   and   definition,   a   process   that   can   be   complex   and lengthy
(especially   when   users   keep   changing their minds). Both records and MIS
departments   are   hard   pressed   to   demonstrate   why   increased   **workload**
 requires   additional headcount. Notice, however, that the people who staff
records departments and MIS departments are...

 25/3,K/40   **(Item 8 from file: 15)**
DIALOG(R)File   15:ABI/Inform(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

00704666   93-53887
Hot news in hot site selection
Foster, Al
Security Management   v37n4   PP: 65-72   Apr 1993
ISSN: 0145-9406   JRNL CODE: SEM
WORD COUNT: 4836

...TEXT: team is crucial ⬤o the success of the project. ⬤should be no larger than **necessary** to complete the associated **work** load ; however, it is vital that the people chosen be highly competent and knowledgeable in project management of **computer** **hardware** performance and capacity **requirements** , network **hardware** performance and capacity **requirements** , network protocols, **operating** systems **requirements** , **application** **software** **requirements** , facilities and environmental requirements, and technical staffing requirements for the hot site team.

Once the...

25/3,K/41   (Item 9 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

00655519 93-04740
Holding the Reins on Distributed Databases
Wolfson, Ken
Chief Information Officer Journal v5n2 PP: 48-51 Fall 1992
ISSN: 0899-0182 JRNL CODE: CJL
WORD COUNT: 1664

...TEXT: to the central database using the remote request or remote unit of work.

CONCLUSION

Distributed **database** and **client / server** technologies respond to the **demands** of flatter organizations by facilitating the development of workgroup solutions and providing broader access to...

... distributed database is not a panacea. It is neither a short-term solution to the **demands** of increasing application **workloads** , nor is it a viable means of reducing expenses by leveraging "cheaper MIPS." Moreover, support...

25/3,K/42   (Item 10 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

00629935 92-44875
Charting: The Impact of Bedside Computers
Lower, Mary S.; Nauert, Lois B.
Nursing Management v23n7 PP: 40-44 Jul 1992
ISSN: 0744-6314 JRNL CODE: NSM

...ABSTRACT: June 1, 1987, and running through February 12, 1990, provides some insight into whether convenient **terminals** with **programs** geared ·to operational **needs** really do save time. A time series study and a nursing functions study showed a...

... increase in charting time appears to be a combination of charting that resulted from unit **workload** increases and that charting previously **requiring** overtime to finish was being completed within standard shift times at the bedside computer.   ...

25/3,K/43   (Item 11 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

00586596 92-01769
Computer Performance Management: Conceptual Considerations from an Operations Research Perspective
Reid, Richard A.; Asprey, Peter L.
Capacity Management Review v19n11 PP: 3-6 Nov 1991

...TEXT: an understanding of their operational environment that includes
the following four characteristics:(14)

1. System **hardware** mechanisms and **software** operations,

2. **Workload** processing **requirements** ,

3. End-user habits and expectations, and

4. The relationship between system performance attributes and...

 25/3,K/44   (Item 12 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

00424822 88-41655
Equipment Leasing -- What's in It for Your Company?
Harrington, Bill
Telephone Engineer & Management v92n20 PP: 54-58 Oct 15, 1988
ISSN: 0040-263X JRNL CODE: TEM

ABSTRACT: It is not always practical for a telephone company to own all of
the **equipment** it **needs** . Leasing **equipment** is an alternative to
purchasing **equipment** . The benefits of a lease **program** include
minimizing capital outlays, ownership commitments, and equipment use, as
well as providing the balance of equipment **needs** during peak **workloads** .
Many different types of equipment leases are available to companies. A
finance lease is a...

 25/3,K/45   (Item 13 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

00219625 83-31186
Implementing an Automated Inventory System
Shultz, Sonya M.; Kannen, William
Hospital Materiel Management Quarterly v5n2 PP: 25-31 Nov 1983
ISSN: 0192-2262 JRNL CODE: HMM

...ABSTRACT: users was formed to evaluate the manual system of inventory
management and to determine the **hardware** and **software** **requirements** of
an automated system. Goals for automation were identified. These goals
emphasized reducing the costs...

... of outside computing was eliminated. The automated system allowed the
purchasing department to increase its **work** **load** while cutting time
 required for the work. ...

 25/3,K/46   (Item 14 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

00197907 83-09468
Data Center Personnel Help Peel-Away Problems
Cox, David A.
Data Management v21n3 PP: 19, 38-40 Mar 1983
ISSN: 0148-5431 JRNL CODE: DMG

...ABSTRACT: this feasibility include: 1. establishment of policy
guidelines for service levels, system life, and operational **requirements** ,
2. identification of present **workloads** , and 3. forecasting future
workloads. The data center personnel should take the lead in: 1.

determining **hardware** ● systems **software** req●ments , 2.
identifying the telecommunications network to be used for the system, and
3. preparing the...

 25/3,K/47 **(Item 15 from file: 15)**
DIALOG(R)File 15:ABI/Inform(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

00144647 81-14517
Select Software First
Anonymous
Systems & Software Review v1n6 PP: 9-10 1980
JRNL CODE: SSR

ABSTRACT: **Software** **requirements** should be considered prior to **hardware**
 needs , especially when thinking of future data processing (DP) growth.
Too often, **hardware** advances take precedence over **software**
 requirements . User **requirements** most often revolve around software
design, and user needs are the prime consideration when planning...

... growth. Current systems and capacities should be reviewed prior to
implementation of new systems. Future **workload** and user **demands** on the
system must be determined. It is sometimes a good idea to have system...

 25/3,K/48 **(Item 16 from file: 15)**
DIALOG(R)File 15:ABI/Inform(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

00121139 80-15108
P-M for On-Line Response
Anonymous
Systems & Software Review v1n2 PP: 3-5 May 1980
JRNL CODE: SSR

...ABSTRACT: developed for on-line systems that will prevent the user
community from unexpectedly outgrowing the **computer** system. This type of
 program **requires** that managers know: 1. the current on-line system
performance and capacity, 2. the level...

...access use. System goals should include knowledge of acceptable response
time, allowable down time, recovery **requirements** , and **workload** support.
Future **needs** should be evaluated for growth trends, requirements for each
user or application, schedules, and current...

 25/3,K/49 **(Item 1 from file: 635)**
DIALOG(R)File 635:Business Dateline(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

0788503 97-47154
Portland-based Benova suffers cash crunch, files for bankruptcy
Woodward, Steve
Oregonian (Portland, OR, US) pD1
PUBL DATE: 970214
WORD COUNT: 515
DATELINE: Portland, OR, US, Pacific

TEXT:

 ...to a trade newsletter, Managed Medicare & Medicaid News. But the
state failed to provide the **computer** **hardware** and software **required**
to handle **workloads** that rose nearly tenfold, the newsletter reported.

 By September, Benova's 350 California workers were...

25/3,K/50   (Item 2 from file: 635)
DIALOG(R)File 635:Business Dateline(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

0304467 92-51077
Laserfile International Signs With Document Technologies
Sweat, Craig
Business Wire (San Francisco, CA, US) s1 p1
PUBL DATE: 920623
WORD COUNT: 488
DATELINE: Kenner, LA, US

TEXT:

     ...Laserfile. "As customers grow, we have to provide systems that can
handle the ever increasing **workload** , but without **requiring** changes in
their existing **hardware** and **software** environments. We selected DTI
because their PC components give us that flexibility."

     Laserfile's business...

 25/3,K/51   (Item 1 from file: 9)
DIALOG(R)File   9:Business & Industry(R)
(c) 2002 Resp. DB Svcs. All rts. reserv.

03353561 (USE FORMAT 7 OR 9 FOR FULLTEXT)
BMC Unleashes Linux Barrage
(BMC Software)
Linuxgram, n 202, p N/A
January 28, 2002
DOCUMENT TYPE: Newsletter   (United States)
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 514

 (USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:
...go on IBM zSeries mainframes in June. Besides providing customers the
ability to allocate their **hardware** choices based on **workload**   **needs** ,
the new **programs** are also supposed to let them define topologies such as
networks, databases and files required...

 25/3,K/52   (Item 1 from file: 810)
DIALOG(R)File 810:Business Wire
(c) 1999 Business Wire . All rts. reserv.

0979481   BW1270

CA AMDAHL: Amdahl Innovations Help Customers Save Time and Money

February 16, 1999

Byline: Business Editors/High Tech Editors

     ...is
providing a single-frame computer with up to four separately serialed
computers within. ISV **software** can be licensed to the individual
computers so customers pay fees only on **software**   **necessary** to run a
specific **workload** --rather than paying based on the total capacity of
all the servers in the frame...

 25/3,K/53   (Item 1 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext
(c) 2002 CMP Media, LLC. All rts. reserv.

01238122   CMP ACCESSION NUMBER: EET20010611S0063
Linux: the ideal client/server link
Michael Tiemann, Chief Technical Officer, Red Hat Inc.,   Research Triangle
    Park, N.C.
ELECTRONIC ENGINEERING TIMES, 2001, n 1170, PG102
PUBLICATION DATE: 010611
JOURNAL CODE: EET   LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: COMMUNICATIONS - FOCUS: NET-CENTRIC FRAMEWORKS
WORD COUNT: 2027

...   the operating system of the connected world must scale. It must
scale down to minimal **configurations** on esoteric **hardware** , and scale
up to handle high- **demand** transactional **workloads** on SMP **servers** .

 This is possible only through a consistent API or a hierarchical
set of APIs, and...

 25/3,K/54   (Item 2 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext
(c) 2002 CMP Media, LLC. All rts. reserv.

01032111   CMP ACCESSION NUMBER: NWC19940801S0040
Clocking Client/Server Performance
David McGoveran
NETWORK COMPUTING, 1994, n 509, P73
PUBLICATION DATE: 940801
JOURNAL CODE: NWC   LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: Client/Server Databases
WORD COUNT: 1263

...   some enterprising company.
     Of course, none of these benchmarks is likely to test your specific
client / server   workload and functionality **requirements** . Instead of
trying to interpret irrelevant benchmark data, consider ``rolling your
own.'' You need to...

 25/3,K/55   (Item 1 from file: 613)
DIALOG(R)File 613:PR Newswire
(c) 2002 PR Newswire Association Inc. All rts. reserv.

00658583 20011016SFTU075 (USE FORMAT 7 FOR FULLTEXT)
Processor Triathletes Outrun Sprintersencesnerter Results
PR Newswire
Tuesday, October 16, 2001 15:02 EDT
JOURNAL CODE: PR LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
DOCUMENT TYPE: NEWSWIRE
WORD COUNT: 1,354

...computing has emerged as the high growth
technology segment for this decade. Applications and computing **workloads**
have
followed suit, emphasizing **needs** to reliably process many tasks in
parallel.
     System requirements for these machines include a balanced...

...and serviceability. Rather than budgeting transistors to simply
achieve high clock speeds, the multidimensional system **requirements** of
networked **client / server** systems call for balanced budgeting of
processor
transistors to achieve multi-axis system performance goals...

090496
Smartcard review how we did it
Journal: Network World   Page Number: 51
Publication Date: January 15, 2001
Word Count: 428   Line Count: 39
Text:
We installed the Alacritech 100x4 NIC in a Dell PowerEdge 6400 along with
four Intel Pro100+ NICs. We ran a suite of four tests against the PowerEdge
6400 with the Intel NICs enabled and the Alacritech NIC disabled. We then
reran all tests with the Alacritech NIC enabled and the Intel NICs
disabled.   This   process   was   repeated with the Dell server in a
single-processor configuration and a four- **processor** configuration. Intel
Pro100+ NICs were **used** because they are the most pervasive models of NIC
in the server market. Twelve clients were used to create a workload for the
server   configuration   under   test.   Six   of   the   **clients**   are
four-processor machines with RAM amounts ranging from 512M to 2048M bytes.
The remaining six clients are two-processor machines with RAM amounts
ranging from 256M to 1,024M bytes. The clients were divided into four IP
subnets. Each of these subnets corresponds to one of four subnets
representing one of the four enabled NIC ports on the server. All clients
and server NIC ports are connected to a Cisco 2948 Ethernet switch. All
switch ports and NICs are configured for 100M bit/sec full-duplex
operation, thus disabling Ethernet autonegotiation.The suite of tests
consists of a network file read test, a MSSQL database test, a random
read/write file test and a sequential read/write file test. The tests were
implemented using Benchmark Factory from Quest Software. The network file
read test sequentially reads a 1G-byte file from the server from all
clients simultaneously. The random read/write file test does random
simultaneous reads and writes from the server. The Sequential read/write
file test does random simultaneous reads and writes from the server. The
MSSQL **database** test invokes two **types** of SQL statements to an instance
of MSSQL 7.0 Enterprise running on the Dell server. One statement is very
CPU intensive, generating a few **transactions** per **second** , and the other
statement has minimal impact on **CPU   utilization** , generating large
numbers of **transactions** per **second** .In each test, the number of virtual
users is increased to obtain a performance curve. Multiple concurrent
virtual users can be run from one machine, simulating large numbers of
users on many client machines. No information as to the maximum number of
supported users by the Dell server, Intel NICs, Alacritech NICs or any of
the related software can be derived from the results of these tests. During
the network file read test, the NT performance monitor is invoked when
there is a low number of virtual users to get a comparison of **CPU**
utilization   between the two NIC manufacturers for one- and four-CPU
server configurations.

077787
Network fire prevention
You'll need a tool kit that includes performance monitoring gear,
application modeling tools and, soon, neural network software.
Byline: PAUL DESMOND
Journal: Network World   Page Number: 49
Publication Date: September 20, 1999
Word Count: 2108   Line Count: 192
Text:
It's the universal complaint of the network executive: you spend too much
time running around fighting fires - attending to the various network
flare-ups that threaten to bring down your business.But it doesn't have to
be that way. There are tools available today that, while perhaps stopping
short of fire-proofing your network, will lead you to where brush fires are

starting, giving you time to douse the flames before they cause any real damage.At the most basic level, performance monitoring tools help you get a lead on your normal network performance and perform trend analysis to determine when things are deviating from that norm. That won't fix your problems, but at least it will point you to where trouble spots are developing in **time** for you to take corrective **actions** . There are dozens of performance monitoring tools available - from vendors including Concord Communications, FirstSense, Ganymede Software, International Network Services (INS), NextPoint Networks and Tavve Software - many of which get rave reviews from users. Modeling tools hold another key to predictive net management. Vendors, including Ganymede, MIL 3 and Optimal Networks, offer tools that can help you predict what the addition of a new application or other changes will mean to your network performance. In some cases, the tools enable you to conduct stress tests and what-if scenarios, such as predicting the effect on response time of adding another 100 SAP R/3 users. "That's proactive in that you can start to find envelopes of behavior where you can function normally and where you're going to start getting in trouble," says John McConnell, president of McConnell Consulting in Boulder, Colo.Lurking on the horizon is neural network technology, which promises to further the predictive network management cause even more. Computer Associates already has neural agents, dubbed Neugents, for predicting impending doom on NT servers. The devices "learn" about the behavior of the system they're monitoring and can give advance warnings when situations occur that have led to problems in the past. The company expects to deliver Neugents for routers and switches by year-end. Baselining and performance monitoringPerformance monitoring tools, such as Concord's Network Health and Ganymede's Pegasus, generally paint a picture of what your network performance looks like under normal, everyday conditions, and then point you to areas in which performance is subpar. Depending on the modules you implement, you can get reports on network performance or on network and application performance.Ganymede, for example, offers a severity index based on a composite of availability, response time and throughput exceptions. Based on a scale of one to 100, the index helps you identify which elements are operating farthest out of their normal range, theoretically pointing you to the source of a performance problem. Pegasus also provides a trend index that shows which elements are changing most rapidly. "It points you to the issues that will make the phones ring next week," such as a frame relay link that is operating at an unusually high utilization rate, says Jim McQuaid, director of monitoring solutions at Ganymede. Nortel Networks is nearly done deploying Pegasus on its worldwide WAN, says Peter Massam, network management technologist for the company in its Maidenhead, England, network operations center. "The first real useful data to come out of this was the aggregated views we had of our locations," Massam says. "We could see full application performance by region and identify the hot spots to concentrate on." For example, the product helped him troubleshoot a nagging performance problem on a link between the U.K. and Madrid. Pegasus confirmed that application response time was subpar and indicated it was due to sluggish throughput on the link. Bumping up the speed of the link quickly cured the problem.Similarly, Massam says, Pegasus has pointed Nortel to frame relay links that were underutilized, meaning Nortel was paying for more bandwidth than it needed given the amount of traffic flowing over the link. The company was able to lower the committed information rate on those links, saving money. Jim Gross, manager of telecommunications for Lockheed Martin in Research Triangle Park, N.C., has had similarly positive results with Tavve's performance monitoring tool, which he has been using for about a year. "It points us to a pending problem almost weekly," he says.For example, the Tavve tool alerted Lockheed to abnormal bandwidth usage that threatened the performance of a client/server application in a Washington, D.C., office. "We were way ahead of the game in identifying what that additional bandwidth was being used for and were on the phone getting them to curtail that activity before customers were on the phone telling us their application wasn't working anymore," Gross says.Tavve's product, dubbed tsc/PRM, works with Hewlett-Packard's OpenView or Tivoli's NetView for AIX, feeding off SNMP data those systems collect to create Web pages that graphically show network performance. "And it's up-to-the-second current," says Anthony Edwards, founder and chief technology officer for Tavve.Users can set thresholds and be warned when a device is within 30, 60

or any other number of days ● reaching the threshold. For e●ple, maybe a router's **CPU** is **operating** at 60% of capacity half the time, when the threshold is 70% half the time. The Tavve product could determine that if **CPU utilization** continues to increase at the same rate, the threshold will be reached in 30 days, giving the user time to troubleshoot the problem. There's also a report that lists seemingly minor events that are happening repeatedly, an indication that a problem exists. And a service-level agreement facility alerts net managers well ahead of time if they're in danger of not meeting an SLA. "We're using the reports to try to be proactive with our network and look at trends," says Mark Jones, enterprise management systems analyst III at BB&T, a bank based in Winston-Salem, N.C., that has about 600 branches. Besides the bandwidth utilization reports, Jones notes that tsc/PRM alerts him to the top 10 consumers of bandwidth on the network, which helps in troubleshooting. Tavve users invariably point to the company's correlation engine, tsc/EventWatch, as the crown jewel of Tavve's product lineup. While a correlation engine would not seem to be proactive in nature – it sorts through alerts to identify the source of an outage – users say the Tavve product is so good that it can sometimes help them repair the fault before end users are aware there's an outage. And it definitely reduces the time it takes to fix a problem, users say (see story, this page). Model of successNetwork modeling tools are more proactive still, alerting you to potential problems before you go live with changes to your net. Robert Rohlin, senior consultant with Modis Solutions, a consulting company in Dallas, has been using MIL 3's ERP Network Guru for SAP R/3 to model an SAP installation for a petrochemical company client that has a 6,000-user network. Each of the company's 27 sites will be running SAP and many of them are overseas, compounding the response time issue. Rohlin already had baseline performance data from Concord tools that he could plug in to the MIL 3 product. To that, he added the expected SAP traffic load. "The thing we really like about MIL 3 is that we can get real specific, saying how much memory each router has, how much bandwidth and what protocols it's running," he says. You can also define heavy vs. light users, the specific SAP modules employed and various other characteristics. Given all those variables, he says it takes time to build the initial model, but once that's done it's easy to create multiple scenarios to find the one that yields optimal performance. The modeling tool also points out potential problems that would be easy to miss. For example, if you double bandwidth from one site to a particular application server, it could slow response time for all others using that server because now there is more competition for the same resources. There are two general ways to conduct network modeling, according to March Cohen, CEO and chairman of MIL 3. The first is analytical, where the modeling tool uses mathematical equations derived to approximate protocol behavior and delays. The other is discreet, which involves modeling actual, individual packet transactions, including how packets are delayed at different points in the network and the effect of any protocols involved. "The discreet model is almost a replication of what's happening in reality," Cohen says. With any modeling tool, it's crucial to verify your results before diving in too deep. Cohen says you should start by getting baseline performance data for a given application using existing monitoring tools. Then model that same application and compare the results. As you make changes, again compare the results from the monitoring tools with what the modeling tool predicted. That's essentially what Rohlin did to verify that MIL 3's tool was giving him accurate SAP modeling data. SAP was already installed at some sites in Europe, and the company was collecting monitoring data. He diagrammed a small site in Germany using the ERP Network Guru, ran some simulations and matched it up to the real-world performance data. "The results were amazingly close," he says. Neural nirvanaNeural network technology, and potentially other forms of predictive logic, may likewise one day prove to have some fairly amazing predictive capabilities. Frank Dzubeck, president of Communications Network Architects, a consultancy in Washington, D.C., says neural logic is one of three types of logic that may come into play to yield more proactive network management systems. The other two are chaos logic, which determines patterns when none are evident, and genetic logic, which detects patterns in hierarchical structures, from one generation to the next. Neural technology is furthest along at this point, with Computer Associates already delivering the technology for NT systems. Dzubeck says

IBM is working on neural agents of its own. IBM says it doesn't use the term neural, but Tivoli's Distributed Monitoring technology is based on the same principles. Sorrel Jakins, director of server systems at Brigham Young University in Provo, Utah, has been testing CA's NT-based Neugents since last fall. "We have about 30 to 35 NT servers and it's working very well on those." Typical statistical inference engines make predictions of future failures based on a large spread of existing data. Neugents don't require this existing knowledge base; rather, they continuously monitor a system or device and determine the complex patterns that indicate abnormal behavior. "Neugents are pretty good at taking skewed data and still making a good prediction," Jakins says. Ron Cass, divisional assistant vice president for Neugent research and development at CA, says Neugents train themselves to recognize patterns on an individual system or device by monitoring various parameters. On a router, for example, Neugents will monitor for excessive protocol traffic, header errors, IP address errors, fragment failure, discarding of good traffic – about 20 attributes in all.Rather than working from a **database** of information about the same **type** of router, Neugents start fresh with each router they monitor, Cass says. "Every router is different. The amount of traffic a router responds to depends on where it is." From the data they gather, Neugents learn what patterns of behavior lead to problems, including performance degradation, failed interfaces or whatever you program the Neugent to look for. Thresholds are set automatically, based on what the Neugent determines is normal behavior for the router, and they change every night to keep up with varying conditions. When a Neugent detects a pattern of behavior that led to a problem in the past, and if it's serious enough to trigger the threshold, the Neugent issues an alert detailing the impending problem.Neugents live on CA's NetworkIT Pro management console and **require** no **software** on the **device** to be monitored other than standard MIB 2 and Remote Monitoring agents. Each Neugent can monitor between 10 and 50 devices, depending on their complexity, but there's no limit to the number of Neugents you can install. Jakins says BYU has seen occasions where a Neugent says network traffic is increasing such that a server will have a problem in 15 minutes. "We've had our network people take corrective measures, but we've also sat back and watched to see what happened," he says. "The timing has been pretty accurate, and the predicted effects have been accurate, too." Asked if he sees the Neugent technology translating to a network scenario, where it can make the same sorts of predictions for routers and switches, Jakins answers with a thoroughly optimistic "most definitely." Desmond, a former Network World editor, is now vice president of King Content, a strategic publishing company in Southborough, Mass. He can be reached at paul_desmond@king-content.com

27/3,K/1   (Item 1 from ⬤e: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)

01432083   Supplier Number: 46742781   (USE FORMAT 7 FOR FULLTEXT)
**Sybase's SQL Server 11 and Replication Server Available on Data General's
  AViiON Platform**
PR Newswire, pN/A
Sept 26, 1996
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 872

   (USE FORMAT 7 FOR FULLTEXT)
TEXT:
...SQL Server 11 database achieved the best Transaction Processing Council
Benchmark (TPC-C) performance per **CPU** . The AV 4900, **running** Data
General's DG/UX operating system and configured with 236 GB of CLARiiON
disk storage, was measured at 3809.7 order entry **transactions** per **minute**
 (tpmC). The benchmark, which was run in a **client** / **server**   **configuration**
, also showed that the five year cost of ownership for the user would be
$129...

...competitive advantage," said David Hsieh, vice president of product
marketing for Sybase's Enterprise Business **Group** . "SQL **Server** and
Replication **Server** , along with Data General's AViiON systems, provide
enterprises with superior performance and scalability for...

 27/3,K/2   (Item 2 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)

01341333   Supplier Number: 46103866   (USE FORMAT 7 FOR FULLTEXT)
AMD DRIVES BATTERY-POWERED SYSTEMS WITH NEW 2. 7 VOL T-ONLY FLASH FAMILY
News Release, pN/A
Jan 30, 1996
Language: English   Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 958

   (USE FORMAT 7 FOR FULLTEXT)
TEXT:
...positioning systems. Future applications include digital cameras,
hand-held digital voice recorders and pagers. These **applications**   **require**
 2.7 Volt single powersupply Flash **devices** to support extended life
operation of alkaline and rechargeable batteries Am29LV800 Overview AMD's
single...

...These devices also operate over the extended temperature range, which is
critical in many portable **applications** . Low Power Consumption The
Am29LVxxx **family** is designed for low power consumption in read, program
and erase modes. In these active...
...than 1 uA of current. The device will "wake-up" with the standard read
access **time** when it sees bus **activity** . High Performance The read access
 time of the Am29LV800 device is as fast as 100 nanoseconds, allowing
operation of high-speed **microprocessors** with zero **wait** states. The
highperformance Am29LVxxx **family** offers **program** and erase performance
comparable to 5.0 Volt-only and 12.0 Volt Flash devices...

 27/3,K/3   (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

08124425   SUPPLIER NUMBER: 17389671   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Plastics technology: manufacturing handbook & buyers' guide 1995/96.(Buyers
  Guide)**

...   plates.
    WARREN ELECTRIC CORP.
    Flanged, screw plug, circulation and over-the-side heaters for new
applications and replacement **needs** . Flanges in steel or stainless steel
with ratings from 150 to 1200 psi. Screw plugs...

...on all other points. Plastic housing with watertight membrane switch.
Optional accessories include four different **types** of probes: universal,
surface, air-gas, and hypodermic.
    Model DT-156 thermometer has a range...circuitry, CompuStep start-up,
manual and closed-loop control, and power on/off switch. With
microprocessor PID control and complete diagnostics, module operates
automatically after setting temperature and turning on power...in design;
autotune PID; RS232C, RS422, and RS485 serial communications; universal
programmable inputs; remote and **second** setpoints; dual-programmable
alarms; and heat/cool control mode.
    AutoProbes I and II traveling melt...digit, 14-mm display; and Model
200 a 3-digit, 20-mm display. Four operational **software** levels accessible
only by entry codes.
    GENERAL EASTERN INSTRUMENTS
    For monitoring liquid temperature, TT-I...

    27/3,K/4   (Item 1 from file: 674)
DIALOG(R)File 674:Computer News Fulltext
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    090496
    Smartcard review how we did it
    Journal: Network World   Page Number: 51
    Publication Date: January 15, 2001
    Word Count: 428   Line Count: 39

    Text:
    ... process was repeated with the Dell server in a single-processor
configuration and a four- **processor** configuration. Intel Pro100+ NICs were
used because they are the most pervasive models of NIC in the server
market. Twelve clients were used to create a workload for the **server**
configuration under test. Six of the **clients** are four-processor
machines with RAM amounts ranging from 512M to 2048M bytes. The remaining
...

    ... read/write file test does random simultaneous reads and writes from the
server. The MSSQL **database** test invokes two **types** of SQL statements to
an instance of MSSQL 7.0 Enterprise running on the Dell server. One
statement is very CPU intensive, generating a few **transactions** per
second , and the other statement has minimal impact on **CPU** **utilization**
, generating large numbers of **transactions** per **second** .In each test, the
number of virtual users is increased to obtain a performance curve...

    ... invoked when there is a low number of virtual users to get a comparison
of **CPU** **utilization** between the two NIC manufacturers for one- and
four-CPU server configurations.

    27/3,K/5   (Item 2 from file: 674)
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    077787
    Network fire prevention
    You'll need a tool kit that includes performance monitoring gear,

application modeling t●●s and, soon, neural network so●●re.
Byline: PAUL DESMOND
Journal: Network World   Page Number: 49
Publication Date: September 20, 1999
Word Count: 2108   Line Count: 192

Text:
... problems, but at least it will point you to where trouble spots are
developing in **time** for you to take corrective **actions** . There are dozens
of performance monitoring tools available - from vendors including Concord
Communications, FirstSense, Ganymede...

...any other number of days of reaching the threshold. For example, maybe a
router's **CPU**   is   **operating** at 60% of capacity half the time, when the
threshold is 70% half the time. The Tavve product could determine that if
CPU   **utilization** continues to increase at the same rate, the threshold
will be reached in 30 days...failure, discarding of good traffic - about 20
attributes in all.Rather than working from a **database** of information
about the same **type** of router, Neugents start fresh with each router they
monitor, Cass says. "Every router is... alert detailing the impending
problem.Neugents live on CA's NetworkIT Pro management console and **require**
no   **software**   on the **device** to be monitored other than standard MIB 2
and Remote Monitoring agents. Each Neugent can...

27/3,K/6   (Item 3 from file: 674)
DIALOG(R)File 674:Computer News Fulltext
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075421
Reining in the road warrior
Connect:Manage, Orbiter and Mobile Automation all do a good job of
managing mobile users.
Byline: Steven Goldberg
Journal: Network World   Page Number: 65
Publication Date: June 21, 1999
Word Count: 2260   Line Count: 220

Text:
... job or activity distribution approaches of Orbiter and Mobile
Automation. Connect:Manage supports four different **types** of channels:
software   distribution,   session manager, document management and
transmitter. The transmitter channel provides a means of broadcasting...

... on the administration console. Jobs come in four basic flavors:
inventory,   change analysis, maintenance and **software**   distribution.
Creating inventory and maintenance jobs **requires** little input. For
inventory jobs - **hardware** and **software** - select target machines and
determine the schedule or frequency with which the job should run...
... Desktop Management Interface-compliant, it produces a good amount of
detail about each system, including **operating** system version, service
packs, **processor** , total memory and hard disk space.Software distribution
jobs are also simple to create. Orbiter...

... synchronize the contents of a source folder. You can create a recurring
schedule when the **job** is created. Each **time** the **job** runs, it checks
the original source directory for updated files. This process helps keep
data... these devices and easily deploy them the next time the devices
synchronize with their host **PCs** . **Server** installationInstalling and
configuring Connect:Manage's console is simple. You only need to install
a service that Connect...

... an e-mail administration account. Mobile Automation includes good
documentation and context-sensitive online help. **Client** installationOnce
you **configure** the **server** **software** , the next step is to create a setup
package to deploy to client systems. Connect...

... 8.5M-byte installation, which is practically speaking too big to send

over a modem, **requires** ●meone on the **client** PC to in● the **server** name and transport **type** . The parameters are too technic●l to trust to end users, so an IT visit is...

27/3,K/7   (Item 4 from file: 674)
DIALOG(R)File 674:Computer News Fulltext
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070772
Web site sentinels
These three Web management tools have different styles, but one proves best at keeping your site running smoothly: WebTrends' Enterprise Suite 3.0.
Byline: Thomas Powell
Journal: Network World   Page Number: 55
Publication Date: December 07, 1998
Word Count: 2166   Line Count: 199

Text:
... results of processed logs. Other interesting log analysis features include support for clusters and proxy **server** logs, filters to **sort** out multiple domains served from a single machine, Open Database Connectivity support for access to...

... mail. You can also watch basic system services such as disk space avai! lability, memory **use** and **CPU** **utilization** ; and you can request that warnings be issued when thresholds are reached. Additionally, SiteScope monitors...
... HTML! - and Java-based browser interface, you'll discover a wealth of useful tools. WebChallenger **requires** an NT 4.0 **workstation** or **server** with 32M bytes of RAM and more than 100M bytes of free disk space. WebChallenger does not run on the same **machine** as the Web **server** and does not **require** a remote component on monitored servers. Even! so, it provides sophisticated network and server monitoring...

... URLs per test cycle. After benchmar! king a server, WebChallenger produces a report that includes **transactions** per **minute** , as well as throughput and response time in milliseconds. While more complex Web server load near real time on a **variety** of **servers** . Finally, Web Verify provides basic site link checking and some quality assurance measures, such as...

27/3,K/8   (Item 5 from file: 674)
DIALOG(R)File 674:Computer News Fulltext
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050282
SMP or bust
LAN World
Will this be the technology to take Novell to new success?
Byline: Ram Tackett
Journal: Network World   Page Number: 27
Publication Date: March 04, 1996
Word Count: 1143   Line Count: 107

Text:
... system will carry the company beyond the file and print domains. One certainty is that **client** / **server** processing **requires** a more robust, scalable architecture than is provided by traditional network operating sys- tems (NOS...

... platforms, NetWare SMP attempts to do away with CPU bottlenecks by allowing multithreaded applications to **run** over more than one **processor** at a time. This lets servers accomplish more work in less **time** . Novell revamped some core server **processes** to enable multithreading in NetWare SMP. It has added performance and scalability enhancements to the...

...sec on the base NetWare ●. Processing power Theoretical ● NetWare SMP
is designed to **run** on as many as 64 **processors** . However, SMP
implementations vary among system vendors - Novell for the first time in
its history...company still faces three major stumbling blocks. First, many
users simply don't need the **kind** of horsepower SMP offers. Most **servers**
still provide file and print services, neither of which are **CPU**
-intensive. Second, SMP-based **operating** systems and the **applications**
that **require** them are immature. Last, **hardware** vendors still cannot
provide performance boosts in proportion to the number of processors.
Remember, throwing...

27/3,K/9   (Item 6 from file: 674)
DIALOG(R)File 674:Computer News Fulltext
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044307
DATA DELIVERY
Buyers's Guide
**DBMS vendors boost power at high end, work on slimmed-down products for
    low end, and deliver on mid-range promises for replication and new
    data types.**
Byline: Colin White
Journal: Network World   Page Number: 39
Publication Date: May 15, 1995
Word Count: 2763   Line Count: 258

Text:
... work with copies of shared data, improving performance and data
availability. Support for new data **types** makes it possible for **DBMS**
 servers to store complex images, text, maps, audio and video, along with
simple numbers and character strings, on servers across the enterprise. The
three variables that factor heaviest in the **DBMS server** selection
equation are the **type** of data and **applications** used, as well as the
requiredperformance. There are some simple guidelines to follow to see
which **type** of specialized **DBMS server** you should examine. Products
that are fit for enterprise environments support more than 100 users...
...support as many as 20 users and databases of up to 1G byte per single
 CPU server. Workgroup DBMS servers **run** applications that enable users
to share common data. The emerging set of so-called personal...

... the operating system and the machine hardware. To exploit the power of
SMP or MPP **machines** , a **DBMS server needs** to support parallel query
processing or parallel transaction processing. Parallel query processing is
beneficial for...

... performance of OLTP applications. The objective of parallel processing
in decision support is to improve **query** response **time** . With parallel
 query processing, each **query** is decomposed by the DBMS server into a
series of tasks, and each task is...While MPP offerscontinued performance
enhancement for parallel transaction processing, it comes at a price. Each
 processor has to **run** its own copy of the DBMS and employ a distributed
lock manager to maintain data...

... is to use application middleware, such as remote procedure calls or
message-oriented middleware. This **type** of middleware provides more
 application flexibility for handling processing across multiple servers
and has the benefit of being DBMS vendor... development of complex
multimedia applications, there is now a need to let users define data
 types and functions themselves so **applications** can better manipulate
stored information. One of the first products to support a user-definable
 . . .

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File 239:Mathsci 1940-2002/May
          (c) 2002 American Mathematical Society

Set   Items   Description
S1   3344   (SIZING OR SIZE OR SIZES)(5N)(SERVER? ? OR WEBSERVER? ? OR
                  DATABASE? ? OR DBMS OR RDBMS)
S2   33175   (REQUIR? OR NEEDS OR NECESS? OR DEMAND? ? OR CONFIGUR?)(3N-
)(SERVER? OR WEBSERVER? OR APPLICATION? OR PROGRAM? ? OR SOFT-
                  WARE OR DATABASE? OR DBMS OR RDBMS)(3N)(HARDWARE OR CLIENT? ?
                  OR PC? ? OR COMPUTER? ? OR WORKSTATION? ?)
S3   10486   (REQUIR? OR NEEDS OR NECESS? OR DEMAND? ? OR CONFIGUR?)(3N-
)(SERVER? OR WEBSERVER? OR APPLICATION? OR PROGRAM? ? OR SOFT-
                  WARE OR DATABASE? OR DBMS OR RDBMS)(3N)(TERMINAL? ? OR DEVICE?
                  ? OR EQUIPMENT OR MACHINE? ? OR OPERATING)
S4   170950   (WORKLOAD? ? OR WORK()LOAD? ? OR PROCESSING OR PERFORMANCE
                  OR CAPACITY)(5N)(REQUIR??? OR REQUIREMENT? ? OR NEEDS OR NECE-
                  SSARY OR NECESSIT???? OR DEMAND? ?)
S5   255906   (TYPE? ? OR KIND? ? OR SORT? ? OR FAMILY OR CATEGORY OR CL-
                  ASS OR BRAND? ? OR VARIET??? OR GROUP? ?)(5N)(SERVER? ? OR WE-
                  BSERVER? ? OR APPLICATION? ? OR PROGRAM? ? OR SOFTWARE? ? OR -
                  DATABASE? ? OR DBMS OR RDBMS)
S6   84297   (PROCESSOR? OR MICROPROCESSOR? OR PROCESSING()UNIT OR CPU -

```
              OR MPU)(5N)(UT███Z? OR UTILIS? OR USE? ? OR ACT███ OR BUSY OR
              WORKING OR OPERAT??? OR OPERATION? ? OR FUNCTION? ? OR FUNCTI-
              ONING OR RUN???? OR ACTIVE OR ACTIVIT???)
S7       4162    (PROCESSOR? OR MICROPROCESSOR? OR PROCESSING()UNIT OR CPU -
              OR MPU)(5N)(IDLE? ? OR IDLING OR INACTIV? OR INOPERA? OR REST?
              OR WAIT? OR LATENC??? OR LATENT)
S8     308510    (TRANSACTION? ? OR ACTIVIT??? OR PROCESSES OR ACTION? ? OR
              EVENT? ? OR JOB? ? OR TASK? ? OR REQUEST? ? OR QUERY OR QUERI-
              ES)(5N)(RATE OR SPEED OR TIME OR SECOND? ? OR MINUTE? ?) OR T-
              PS
S9       4449    CAPACITY()PLANNING
S10         8    (S1:S4 OR S9) AND S5 AND S6:S7 AND S8
S11         5    RD (unique items)
S12     12236    (S1:S4 OR S9) AND (S5:S8)
S13        91    SIZING(3N)(SERVER? ? OR WEBSERVER? ? OR DATABASE? ? OR DBMS
              OR RDBMS)
S14      2252    (WORKLOAD? ? OR WORK()LOAD? ?)(5N)(REQUIR??? OR REQUIREMEN-
              T? ? OR NEEDS OR NECESSARY OR NECESSIT???? OR DEMAND? ?)
S15       267    S13:S14 AND S5:S8
S16     245364    (REQUIR??? OR REQUIREMENT? ? OR NEEDS OR NECESSARY OR NECE-
              SSIT???? OR DEMAND? ?)(5N)(SERVER? ? OR WEBSERVER? ? OR APPLI-
              CATION? ? OR PROGRAM? ? OR SOFTWARE? ? OR DATABASE? ? OR DBMS
              OR RDBMS)
S17     549700    (REQUIR??? OR REQUIREMENT? ? OR NEEDS OR NECESSARY OR NECE-
              SSIT???? OR DEMAND? ?)(5N)(HARDWARE OR CLIENT? ? OR PC? ? OR -
              COMPUTER? ? OR SYSTEM? ? OR WORKSTATION? ? OR TERMINAL? ? OR -
              DEVICE? ? OR EQUIPMENT OR MACHINE? ? OR OPERATING)
S18        89    S15 AND S16:S17
S19        70    RD (unique items)
S20        63    S19 NOT PY=2001:2002
```

11/5/1   (Item 1 from fi● 8)
DIALOG(R)File   8:Ei Compendex(R)
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05847082   E.I. No: EIP01276566279
   **Title: Thread-level parallelism and interactive performance of desktop
applications**
   Author: Flautner, K.; Uhlig, R.; Reinhardt, S.; Mudge, T.
   Corporate Source: University of Michigan, Ann Arbor, MI 48109-2122,
United States
   Conference Title: 9th Internatinal Conference Architectural Support for
Programming Languages and Operating Systems (ASPLOS-IX)
   Conference Location: Cambridge, MA, United States   Conference Date:
20001112-20001115
   Sponsor: HP; COMPAQ; SUN
   E.I. Conference No.: 58193
   Source: International Conference on Architectural Support for Programming
Languages and Operating Systems - ASPLOS 2000. p 129-138
   Publication Year: 2000
   CODEN: 85MCAT
   Language: English
   Document Type: CA; (Conference Article)   Treatment: A; (Applications); T
; (Theoretical)
   Journal Announcement: 0107W1
   Abstract: Multiprocessing is already prevalent in servers where multiple
clients present an obvious source of thread-level parallelism. However,
the case for multiprocessing is less clear for desktop applications.
Nevertheless, architects are designing processors that count on the
availability of thread-level parallelism. Unlike server **workloads** , the
primary **requirement** of interactive applications is to respond to user
events under human perception bounds rather than to maximize end-to-end
throughput. In this paper we report on the thread-level parallelism and
interactive response time of a **variety** of desktop **applications** . By
tracking the communication between tasks, we can focus our measurements on
the portions of the benchmark's execution that have the greatest impact on
the user. We find that **running** our benchmarks on a dual-**processor**
machine improves response **time** of mouse-click **events** by as much as
36%, and 22% on average - out of a maximum possible 50%. The benefits of
multiprocessing are even more apparent when background tasks are
considered. In our experiments, running a simple MP3 playback program in
the background increases response time by 14% on a uniprocessor while it
only increases the response time on a dual processor by 4%. When response
times are fast enough for further improvements to be imperceptible, the
increased idle time after interactive episodes could be exploited to build
systems that are more power efficient. 18 Refs.
   Descriptors: *Multiprocessing systems; Client server computer systems;
Personal computers; Interactive computer systems; Response time (computer
systems); Sensory perception; Throughput; Mice (computer peripherals);
Servers
   Identifiers: Thread-level parallelism
   Classification Codes:
   722.4 (Digital Computers & Systems); 461.4 (Human Engineering); 912.2
(Management); 722.2 (Computer Peripheral Equipment)
   722 (Computer Hardware); 461 (Bioengineering); 912 (Industrial
Engineering & Management)
   72 (COMPUTERS & DATA PROCESSING); 46 (BIOENGINEERING); 91 (ENGINEERING
MANAGEMENT)

   11/5/2   (Item 1 from file: 202)
DIALOG(R)File 202:Information Science Abs.
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2801752
   Database   sort   **and merge apparatus with multiple memory arrays having
alternating access.**
Author(s): Baum, R I; Brent, G.A.; Gibson, D.H.
Patent Number(s): US 5210870

A **processor functioning** as a coprocessor attached to a central
processing complex provides efficient execution of the functions **required**
for database **processing** : sorting, merging, joining, searching and
manipulating fields in a host memory system. The specialized functional
units: a memory interface and field extractor/assembler, a Predicate
Evaluator, a combined sort/merge/join unit, a hasher, and a microcoded
control processor, are all centered around a partitioned Working Store.
Each functional unit is pipelined and optimized according to the function
it performs, and executes its portion of the query efficiently. All
functional units execute simultaneously under the control processor to
achieve the desired results. Many different database functions can be
performed by chaining simple **operations** together. The **processor** can
effectively replace the **CPU** bound portions of complex database
operations with functions that run at the maximum memory access **rate**
improving performance on complex **queries** .

Descriptors: Access; Array processors; Databases; Host computers
Classification Codes and Description: 6.02 (Bibliographic Search Services,
   Databases); 5.00 (General Aspects)
Main Heading: Information Systems and Applications; Information Processing
   and Control

   11/5/3   (Item 1 from file: 2)
DIALOG(R)File   2:INSPEC
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5358439   INSPEC Abstract Number: B9610-6220F-003, C9610-7120-012
   Title: Voice applications in a multimedia financial information terminal
   Author(s): Gaudette, M.
   Author Affiliation: DSP Software Eng. Inc., Bedford, MA, USA
   Conference Title: Proceedings of the 5th International Conference on
Signal Processing Applications and Technology   Part vol.2   p.1194-9
vol.2
   Publisher: DSP Associates, Waltham, MA, USA
   Publication Date: 1994 Country of Publication: USA   2 vol. 1754 pp.
   Material Identity Number: XX96-01953
   Conference Title: Proceedings of 5th International Conference on Signal
Processing Applications and Technology
   Conference Date: 18-21 Oct. 1994   Conference Location: Dallas, TX, USA
   Language: English   Document Type: Conference Paper (PA)
   Treatment: Practical (P)
   Abstract: While many companies are struggling with what is meant by the
term multimedia, Bloomberg Financial Markets is taking advantage of the
technologies that are currently available to expand the type and form of
data they provide to users of their financial news terminals. The Bloomberg
terminal is primarily used by professionals involved in the various
financial markets. Using current digital signal processing techniques, the
audio portion of news stories created for radio and television broadcast
are compressed at several different digital bit rates. The compressed
versions of the stories are archived and cataloged for ready reference by
terminal users. The two major applications are an audio **processing**
/compression station and on- **demand** decompression of cataloged audio only
or audio/video/data integrated stories. The audio processing and
compression is accomplished at the same time as the associated broadcast
related processing. This is done to ensure the integrity of the data and to
eliminate the need for extra steps in the production/cataloging process.
Decompression occurs in real- **time** , whenever a terminal user **requests** a
story. The speech portion of the story is synthesized at the terminal as it
is downloaded. The focus of this presentation is on the implementation of
the audio component of this multimedia data network. An overview of the
system as a whole will be presented, followed by a more detailed

description of the process█ of audio data. The major part█f the system involve sample rate conversion and voice coding at three different digital rates. While the main focus will be on the DSP specific portions of the system, the data processing techniques used to manage the problem of accessing multiple forms of the same data will also be discussed. The **applications** described run on a **variety** of host platforms with all DSP **functions** implemented on Texas Instruments TMS320C3x **processors** . (0 Refs)

Subfile: B C

Descriptors: audio coding; data communication; data compression; digital signal processing chips; financial data processing; multimedia communication; multimedia computing; telecommunication terminals; voice communication

Identifiers: voice applications; multimedia financial information terminal; Bloomberg Financial Markets; financial market data; audio processing/compression station; on-demand decompression; terminal user; multimedia stories; audio playback; multimedia data network; sample rate conversion; voice coding; host platforms; DSP functions; Texas Instruments TMS320C3x processors

Class Codes: B6220F (ISDN and multimedia terminal equipment); B6210R (Multimedia communications); B1265F (Microprocessors and microcomputers); C7120 (Financial computing); C6130M (Multimedia); C5135 (Digital signal processing chips)

11/5/4   (Item 1 from file: 6)
DIALOG(R)File   6:NTIS

0624008   NTIS Accession Number: AD-489 577/7/XAB
Stage 64: Output Processor Programming Specifications Manual. Volume II. Tally Programs
(Technical rept)
Plengey, W. D.
Technical Operations Inc Washington D C
Corp. Source Codes: 343050
Report No.: TR-65-8-4-VOL-2
Mar 65   430p
Journal Announcement: GRAI7713
See also Volume 1, AD-489 518L. Supersedes Rept. no. TR-63-3.
Distribution limitation now removed. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC A19/MF A01
Contract No.: AF 49(638)-1179
The volume contains a detailed description of the tally and summary programs **used** in the STAGE 64 Output **Processor** Programming specification. The Output Processor is a system of **programs** that **sort** , summarize, and convert into printable form, the raw history outputs produced by the STAGE Simulator. The programs described tally and summarize the sortie history outputs. Tallies, for example, are made up of the number of planes killed, the number of bases damaged or killed, the number of radar sites destroyed. These tallies are grouped in categories such as the **time** period in which the **event** occurred, type of offensive or defensive system involved, attacking wave, etc. Summaries condense the histories of surface-to-surface missile operations and of individual sorties. Included is a brief summary of what happened to each weapon that was on board the sortie at takeoff time. (Author)
Descriptors: War games; *Aerial warfare; Computer programming; Scheduling ; Input output devices; Operations research; Strategic warfare; Nuclear warfare; Digital computers; Simulation; Simulators; Data **processing** ; Flow charting; Military **requirements** ; Attrition; Tanker planes; Jet bombers; Damage; Damage assessment; Radar stations; Surface to surface missiles; Instruction manuals; Specifications; Kill probabilities
Identifiers: Missions; Stage; NTISDODXD
Section Headings: 74G (Military Sciences--Military Operations, Strategy,

and Tactics); 62A (Compu▮▮s, Control, and Information T▮▮ry--Computer Hardware)

11/5/5   (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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09166689   Genuine Article#: 374PG   Number of References: 39
Title: Parametric design synthesis of distributed embedded systems
Author(s): Kang DI (REPRINT) ; Gerber R; Saksena M
Corporate Source: USC,ISI, 4350 N FAIRFAX DR, SUITE 770/ARLINGTON//VA/22203
    (REPRINT); UNIV MARYLAND,INST ADV COMP STUDIES, DEPT COMP SCI/COLLEGE
    PK//MD/20742; TIMESYS CORP,/PITTSBURGH//PA/15213
Journal: IEEE TRANSACTIONS ON COMPUTERS, 2000, V49, N11 (NOV), P1155-1169
ISSN: 0018-9340   Publication date: 20001100
Publisher: IEEE COMPUTER SOC, 10662 LOS VAQUEROS CIRCLE, PO BOX 3014, LOS
    ALAMITOS, CA 90720-1314
Language: English   Document Type: ARTICLE
Geographic Location: USA
Subfile: CC ENGI--Current Contents, Engineering, Computing & Technology
Journal Subject Category: ENGINEERING, ELECTRICAL & ELECTRONIC; COMPUTER
    SCIENCE, HARDWARE & ARCHITECTURE

Abstract: This paper presents a design synthesis method for distributed
    embedded systems. In such systems, computations can flow through long
    pipelines of interacting **software** components, hosted on a **variety**
    of resources, each of which is managed by a local scheduler. Our method
    automatically calibrates the local resource schedulers to achieve the
    system's global end-to-end **performance   requirements** . A system is
    modeled as a set of distributed task chains (or pipelines), where each
    task represents an **activity** requiring nonzero load from some **CPU** or
    network resource. Task load requirements can vary stochastically due to
    second-order effects like cache memory behavior, DMA interference,
    pipeline stalls, bus arbitration delays, transient head-of-line
    blocking, etc. We aggregate these effects-along with a task's
    per-service load demand-and model them via a single random variable,
    ranging over an arbitrary discrete probability distribution. Load
    models can be obtained via profiling tasks in isolation or simply by
    using an engineer's hypothesis about the system's projected behavior.
    The end-to-end **performance   requirements** are posited in terms of
    throughput and delay constraints. Specifically, a pipeline's delay
    constraint is an upper bound on the total latency a computatation can
    accumulate, from input to output. The corresponding throughput
    constraint mandates the pipeline's minimum acceptable output
    rate-counting only outputs which meet their delay constraints. Since
    per-component loads can be generally distributed, and since resources
    host stages from multiple pipelines, meeting all of the system's
    end-to-end constraints is a nontrivial problem. Our approach involves
    solving two subproblems in tandem: 1) finding an optimal proportion of
    load to allocate to each task and channel and 2) deriving the best
    combination of service intervals over which all load proportions can be
    guaranteed. The design algorithms use analytic approximations to
    quickly estimate output rates and propagation delays for candidate
    solutions. When all parameters are synthesized, the estimated
    end-to-end performance metrics are rechecked by simulation. The
    per-component load reservations can then be increased, with the
    synthesis algorithms rerun to improve performance. At that point, the
    system can be configured according to the synthesized scheduling
    parameters-and then revalidated via on-line profiling. in this paper,
    we demonstrate our technique on an example system, and compare the
    estimated performance to its simulated on-line behavior.
Descriptors--Author Keywords: design synthesis ; embedded systems ;
    distributed systems ; soft real-time ; statistical performance
Identifiers--KeyWord Plus(R): REAL- **TIME   TASKS**
Cited References:
    BURNS A, 1994, PRINCIPLES REAL TIME
    CRUZ RL, 1991, V37, P114, IEEE T INFORM THEORY
    DEMERS A, 1989, P1, P ACM SIGCOMM SEPT

20/5/7   (Item 5 from file: 8)
DIALOG(R)File   8:Ei Compendex(R)

03051708   E.I. Monthly No: EIM9104-015625
   Title: Task Analysis/Workload (TAWL). A methodology for predicting
operator workload.
   Author: Hamilton, David B.; Bierbaum, Carl R.
   Corporate Source: Anacapa Sciences, Inc, AL, USA
   Conference Title: Proceedings of the Human Factors Society 34th Annual
Meeting - Orlando '90
   Conference Location: Orlando, FL, USA   Conference Date: 19901008
   Sponsor: Cent Florida Chapter
   E.I. Conference No.: 13987
   Source: Proceedings of the Human Factors Society. Publ by Human Factors
Soc Inc, Santa Monica, CA, USA. p 1117-1121
   Publication Year: 1990
   CODEN: PHFSDQ   ISSN: 0163-5182
   Language: English
   Document Type: PA; (Conference Paper)   Treatment: T; (Theoretical)
   Journal Announcement: 9104
   Abstract: The Task Analysis/Workload (TAWL) methodology was developed to
predict operator workload using the information from a task analysis of the
system. In addition, the TAWL Operator Simulation System (TOSS) was
developed to perform all the data base management and model execution
functions needed to use the methodology. A TAWL workload prediction model
is developed in three stages: task/workload analysis, model construction,
and model execution. The methodology assumes that **demand** on human
attention (**workload**) can be approximated by modeling the separate
cognitive, psychomotor, and sensory requirements of all tasks being
performed by the operator. The model produces half- **second** **time** lines
annotated by **task** names and workload estimates. The output of the models
can be graphed or read by statistical software for further evaluation. TAWL
models are useful to system designers as aids in task allocation between
crewmembers, machine and crewmembers, and workload components, as well as
across time. In addition, the information generated by the models can be
used to evaluate the **system** 's manning and training **requirements** .
Currently, the Army is sponsoring the development of TAWL workload
prediction models for modified versions of the AH-64A (Apache), CH-47
(Chinook), and UH-60A (Black Hawk) aircraft. (Author abstract) 12 Refs.
   Descriptors: *ERGONOMICS--*Computer Applications; COMPUTER SOFTWARE--
Performance; JOB ANALYSIS--Computer Aided Analysis; COMPUTER SIMULATION--
Military Applications; HELICOPTERS, MILITARY--Personnel; SYSTEMS SCIENCE
AND CYBERNETICS--Man Machine Systems
   Identifiers: HELICOPTER CREW TASK ANALYSIS; OPERATOR WORKLOAD SIMULATION
SOFTWARE; HELICOPTER CREW WORKLOAD PREDICTION; COMPUTER AIDED TASK
ALLOCATION
   Classification Codes:
   461 (Biotechnology); 912 (Industrial Engineering & Management); 723
(Computer Software); 404 (Military Engineering); 652 (Aircraft)
   46 (BIOENGINEERING); 91 (ENGINEERING MANAGEMENT); 72 (COMPUTERS & DATA
PROCESSING); 40 (CIVIL ENGINEERING); 65 (AEROSPACE ENGINEERING)

   20/5/8   (Item 6 from file: 8)
DIALOG(R)File   8:Ei Compendex(R)

02090078   E.I. Monthly No: EIM8605-028505
   Title: ALGEBRAIC MODELS FOR CPU SIZING.
   Author: Orchard, Robert A.
   Corporate Source: City Univ of New York, Dep of Computer Science, Staten
Island, NY, USA
   Conference Title: Proceedings of the Computer Performance Evaluation
Users Group (CPEUG) 19th Meeting.
   Conference Location: San Francisco, CA, USA   Conference Date: 19831025
   Sponsor: NBS, Inst of Computer Sciences & Technology, Washington, DC, USA
   E.I. Conference No.: 04842

Abstract: This paper describes a CPU sizing methodology developed for a corporate performance and configuration group. The objective was to predict **CPU   utilization** and total workload turnaround time for future batch workloads. This was accomplished through the implementation of certain algebraic models which successfully model the various components (i. e. , CPU, I/O, etc.) of a computer system, capturing the dynamic interrelationship of hardware configuration, operating system logic and application workload. The result of this work is an algorithm which will accurately forecast average **CPU   utilization** , volume independent **CPU utilization** , initiator turnaround and workload turnaround time for a given workload on various CPU models (3031, 168-3, 168-3 MP, 3033, 3033 MP). From a planning viewpoint, this information is extremely important in determining **hardware   needs** as **application   workload** characteristics change. (Author abstract) 2 refs.
Descriptors: *COMPUTER OPERATING SYSTEMS--*Mathematical Models
Identifiers: ALGEBRAIC MODELS; CPU SIZING; FUTURE BATCH WORKLOADS; VOLUME INDEPENDENT **CPU   UTILIZATION** ; AVERAGE **CPU   UTILIZATION** ; TOTAL WORKLOAD TURNAROUND TIME
Classification Codes:
722 (Computer Hardware); 723 (Computer Software)
72 (COMPUTERS & DATA PROCESSING)

20/5/9   (Item 7 from file: 8)

Title: COMPUTER-ASSISTED HUMAN FACTORS WORKLOAD ANALYSIS SYSTEM.
Author: Smith, Dana M.; Walker, Sherrill A.
Corporate Source: Boeing Military Airplane Co, Wichita, KS, USA
Abstract: The purpose of workload analysis is to generate a graphic comprehensive flow of job-related behaviors in an operational setting so that task efficiency can be maximized. Conventional approaches to **task** -workload analysis are **time** consuming, cumbersome and of questionable accuracy. A new approach to workload analysis is needed which narrows the technological gap between traditional methods and modern **computer systems** . Automated operational **systems   require** increased levels of data integration, visual monitoring and decision making. The conventional stopwatch/clipboard method is no longer the most efficient one for high technology environments. The **computer** -assisted **workload** analysis **system   requires** the utilization of a handheld data entry and storage device capable of interfacing with a personal computer. A four-digit behavioral code records and stores data simultaneously for task-timelines analysis, individual behaviors, and multiple statistical analyses. (Author abstract) 10 refs.
Descriptors: SYSTEMS ANALYSIS; **JOB** ANALYSIS; STATISTICAL METHODS; **TIME** AND MOTION STUDY; SYSTEMS SCIENCE AND CYBERNETICS; HUMAN ENGINEERING
Identifiers: AUTOMATED OPERATIONAL SYSTEMS; WORK MEASUREMENT; ERGONOMICS; HUMAN RESOURCES
Classification Codes:
912 (Industrial Engineering & Management); 922 (Statistical Methods); 913 (Production Planning & Control)
91 (ENGINEERING MANAGEMENT); 92 (ENGINEERING MATHEMATICS)

01230613   E.I. Monthly No: EIM8207-013741
   Title: TECHNIQUES FOR DETERMINING THE SIZE REQUIREMENTS **OF DISPATCH AND
COMMUNICATIONS** SYSTEMS .
   Author: Emerson, Richard F.
   Corporate Source: JPL, Pasadena, Calif, USA
   Conference Title: Proceedings - 1981 Carnahan Conference on Crime
Countermeasures
   Conference Location: Lexington, Ky, USA   Conference Date: 19810513
   Sponsor: Univ of Ky, Coll of Eng, Lexington, USA; IEEE Lexington Sect,
Ky, USA; IEEE Aerosp and Electron Syst Soc, New York, NY, USA
   E.I. Conference No.: 00227
   Source: University   of   Kentucky,   Office of Engineering Services,
(Bulletin) UKY BU 124. Publ by Univ of Ky, Coll of Eng, Lexington, USA.
Also Available from IEEE Serv Cent (Cat n 81CH1661-8), Piscataway, NJ, USA
p 55-64
   Publication Year: 1981
   CODEN: UKOBDS   ISBN: 0-89779-046-4
   Language: English
   Document Type: PA; (Conference Paper)
   Journal Announcement: 8207
   Descriptors: *RADIO COMMUNICATION
   Identifiers: DISPATCH **SYSTEMS** SIZE **REQUIREMENTS** ; COMMUNICATIONS
SYSTEMS SIZE **REQUIREMENTS** ; **SYSTEM** **WORKLOAD** MEASUREMENT; DISPATCH
CENTER ACTIVITIES; PEAK PERIOD AND DEMAND; MEASURING **TASK** MIX; MEASURING
SERVICE **TIME** ; DETERMINING SYSTEM SIZE; PARAMETER EVALUATION; MAXIMUM
THROUGHPUT
   Classification Codes:
   716 (Radar, Radio & TV Electronic Equipment)
   71 (ELECTRONICS & COMMUNICATIONS)

00366176   E.I. Monthly No: EI7405025241
   Title: ON THE CONSTRUCTION OF A REPRESENTATIVE SYNTHETIC WORKLOAD.
   Author: Sreenivasan, K.; Kleinman, A. J.
   Corporate Source: MITRE Corp
   Source: Communications of the ACM v 17 n 3 Mar 1974 p 127-133
   Publication Year: 1974
   CODEN: CACMA2   ISSN: 0001-0782
   Language: ENGLISH
   Journal Announcement: 7405
   Abstract: A general method of constructing a drive workload
representative of a real workload is described. The real **workload** is
characterized by its **demands** on the various **system** resources. These
characteristics of the real workload are obtained from the system
accounting data. The characteristics of the drive workload are determined
by matching the joint probability density of the real workload with that of
the drive workload. The drive workload is realized by using a synthetic
program in which the characteristics can be varied by varying the
appropriate parameters. Calibration experiments are conducted to determine
expressions relating the synthetic program parameters with the workload
characteristics. The general method is applied to the case of two
variables, cpu **seconds** and number of I/O **activities** ; and a synthetic
workload with 88 jobs is constructed to represent a month's workload
consisting of about 6000 jobs. 13 refs.
   Descriptors: *COMPUTER SYSTEMS, DIGITAL
   Identifiers: SYNTHETIC WORKLOAD
   Classification Codes:
   722 (Computer Hardware)

20/5/18   (Item 4 from file: 35)
DIALOG(R)File   35:Dissertation Abs Online
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01481973   ORDER NO: AADAA-I9604350
TOOLS AND TECHNIQUES FOR MEMORY SYSTEM DESIGN AND ANALYSIS   (SOFTWARE DESIGN, CACHE PROFILE, PROCESSORS)
  Author: LEBECK, ALVIN ROY
  Degree: PH.D.
  Year: 1995
  Corporate Source/Institution: THE UNIVERSITY OF WISCONSIN - MADISON (
       0262)
  Supervisor: DAVID A. WOOD
  Source: VOLUME 57/01-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
       PAGE 461.   169 PAGES
  Descriptors: COMPUTER SCIENCE
  Descriptor Codes: 0984

     As processor cycle times decrease, memory system performance becomes ever more critical to overall performance. Continually changing technology and workloads create a moving target for computer architects in their effort to design cost-effective memory **systems** . Meeting the **demands** of ever changing **workloads** and technology **requires** the following: (1) Efficient techniques for evaluating memory system performance, (2) Tuning programs to better use the memory system, and (3) New memory system designs. This thesis makes contributions in each of these areas.
     Hardware and software developers rely on simulation to evaluate new ideas. In this thesis, I present a new interface for writing memory system simulators--the active memory abstraction--designed specifically for simulators that process memory references as the application executes and avoids storing them to tape or disk. Active memory allows simulators to optimize for the common case, e.g., cache hits, achieving simulation times only 2-6 times slower than the original uninstrumented application.
     The efficiency of the active memory abstraction can be used by software designers to obtain information about their program's memory system behavior--called a cache profile. In this thesis, using the CProf cache profiling system, I show that cache profiling is an effective means of improving uniprocessor program performance by focusing a programmer's attention on problematic code sections and providing insight into the **type** of **program** transformation to apply. Execution time speedups for the programs studied range from 1.02 to 3.46, depending on the machine's memory system.
     The third contribution of this thesis is dynamic self-invalidation (DSI), a new technique for reducing coherence overhead in shared-memory multiprocessors. The fundamental concept of DSI is for processors to automatically replace a block from their cache before another processor wants to access the block, allowing the directory to immediately respond with the data. My results show that, under sequential consistency DSI can reduce execution time by as much as 41% and under weak consistency by as much as 18%. Under weak consistency, DSI can also exploit tear-off blocks--which eliminate both invalidation and acknowledgment messages--for a total reduction in messages of up to 26%.

20/5/21   (Item 7 from file: 35)
DIALOG(R)File   35:Dissertation Abs Online
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01413109   ORDER NO: AADAA-I9514579
 REQUIREMENTS **-DRIVEN** DATABASE   SYSTEMS **BENCHMARK METHODOLOGY**
  Author: SENG, JIA-LANG
  Degree: PH.D.
  Year: 1994
  Corporate Source/Institution: UNIVERSITY OF MARYLAND (0117)
  Co-chairmen: S. BING YAO; ALAN R. HENVER

    Benchmarks are vital tools in the performance evaluation and
comparison of relational database management systems (RDBMS). Standard
benchmarks such as the Wisconsin, TP1, TPC-A, TPC-B, TPC-C, and AS$\sp3$AP
benchmarks have been used to assess the performance of RDBMS software.
These benchmarks are synthetic and domain-specific in that they model
typical applications in a problem domain and create synthetic workloads.
Test results from these benchmarks are estimates of possible system
performance for certain pre-determined **application types** . When the user
domain differs from the standard problem domains or if the application
workload is divergent from the synthetic workloads, they do not provide an
effective means to measure the system's performance on the user's problem
domain. Database system performance on actual domain data and transactions
may vary significantly from the benchmark.
    In this research, we address the issue by proposing a
domain-independent benchmark methodology which is developed from the
perspective of the user's **requirements** . We present an **application** -based
approach which models the benchmark development in a process of workload
representation, transformation, and generation. We develop a more
generalized and more precise evaluation method which derives benchmark
suites from the actual user domain and produces test workloads from the
actual transaction specifications.
    Our method comprises three components. They are a high-level
application specification language, a translator of the language, and a set
of generators for the database and the system transactions. We use the
specification language to model and formalize **workload requirements** . We
translate and transform the specifications in the translator. We apply the
generators to produce the test databases and test workloads.
    In this study, we have conducted four experiments to validate the
method. We select the TPC-A, Wisconsin, and AS$\sp3$AP benchmarks as our
standard test cases in the first three experiments. A generalized test case
is used in the fourth experiment to illustrate the generality of our
method. An experimental prototype is implemented and used in these
experiments. Experimental results demonstrate that our method is capable of
modeling standard benchmarks as well as more general benchmark
requirements.

 20/5/22   (Item 8 from file: 35)

01333951 ORDER NO: AAD94-03651
**WORKLOAD PREDICTION IN THE DESIGN OF DYNAMIC CONTROL SYSTEMS: APPLICATIONS
TO ADVANCED MANUFACTURING SYSTEMS (TASK ANALYSIS)**

    Human mental workload is one of the most important factors in
cognitive task allocation of system design. It is reported that current
task allocation methods with generally worded criteria are not very useful
in aiding detailed decision-making in system design. While there have been
many quantitative criteria available to determine the physical space in
human-machine interaction, system designers need some explicit model and
criteria to identify the mental workload imposed by the system, to predict
human and system performance, to evaluate the alternatives of system

design, and to design the system components. It is argued that the available models of human workload or performance are either too domain-dependent to apply to other system designs or subject-dependent which can not reflect the objective workload imposed by the system. The presented research first suggests a new cognitive task analysis method, which could be applied in the dynamic systems with task arrival uncertainty, and a general conceptual model of human workload prediction in system design. Based on the proposed conceptual model, an analytical model of human workload prediction is developed for advanced manufacturing systems. In the newly developed model, the human workload is represented by a set of system parameters, such as **task** arrival **rate** , **task** complexity, **task** uncertainty, and schedule tightness, which are considered as the main sources of human workload. In this context, human **workload** becomes an objective **demand** of **systems** on humans, which is independent of any subjective factors. Whether a specified individual or population is overloaded depends upon their workload threshold with respect to the specified task and environment.

The analytical model is tested using twelve subjects in an interactive scheduling experiment. The tasks consisted of scheduling new arrived tasks, dealing with machine failure, and job expedition in a dynamic manufacturing system. The tasks are designed such that each subject is exposed to all the task load levels based on the combinations of design parameters. The conducted ANOVA and ANCOVA analyses demonstrate that human workload is very sensitive to the changes of system parameter levels. A regression analysis further shows that the human workload and system task load can be represented by these parameters. The experiment also validates the U-shape curve relations (not including the "underload" region) between workload and performance.

This research provides a new approach to cognitive task analysis in a dynamic environment with random task arrivals. Further study is suggested on the human workload and task load models proposed in this study. It is hoped that these models could be used by system designers to predict the human workload imposed by systems after both laboratory and industrial validation.

20/5/23   (Item 9 from file: 35)

01308342   ORDER NO: AAD93-24474
NEW DIRECTIONS IN WORKLOAD CHARACTERIZATION (PARALLEL SYSTEMS, QUEUING THEORY, SEGREGATION MEASURE)
  Author: WAGNER, THOMAS DEHON
  Degree: PH.D.
  Year: 1993
  Corporate Source/Institution: VANDERBILT UNIVERSITY (0242)
  Director: LAWRENCE W. DOWDY
  Source: VOLUME 54/04-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
            PAGE 2076.   237 PAGES
  Descriptors: COMPUTER SCIENCE
  Descriptor Codes: 0984

     Workload characterization is the process of building models of computer system workloads. The problems of workload characterization received much attention over a decade ago. With the development of parallel **systems** this subject **requires** re-examination. New methods for **workload** characterization are developed. Methods for use with traditional systems as well as methods for use with parallel multiprocessor systems are examined. The existing characterizations of parallel workloads are compared and contrasted and mappings between them are developed.

     A method for determining the **workload** **demand** parameters that describe a multi-class queueing network is presented. This new exponential sieve technique is shown to perform better than traditionally accepted techniques. The workload model that is constructed using this technique is used as input to queueing models and is shown useful in constructing performance prediction models.

     A workload characterization based on segregation measures is

introduced. This characteri●ion expresses the error that ●be made when
modelling multi-class systems with single class queueing mod●s. The
behavior of this segregation measure is shown to depend on the variance in
mean **demand** in the workload. This variance in mean **demand** is a measure
of **system** balance. The segregation measure is also shown to depend on a
new measure that expresses how close measured demand data is to single
class.

The evolution and widespread use of MIMD multiprocessors is
accompanied by new challenges for system modellers. This, in turn, implies
new challenges in workload modelling. The prediction of speedup, as
additional processors are assigned to a parallel workload, is one such
challenge. A new algorithm that identifies phases of homogeneous **processor
utilization** in the execution profile of parallel workloads is presented.
By identifying these phases, predictions of the speedup characteristics of
a parallel program are made more accurately.

Another challenge of MIMD multiprocessor systems is the processor
allocation problem. Stochastic learning automata are applied to the
processor allocation problem. In this **use** of stochastic learning
automata, the model of the system and the model of the workload must be
combined. Through simulation, this new approach is shown to be an effective
solution to the problem of how many processors, from a pool of parallel
processors, should be allocated to an arriving job so that total system
power is maximized.

20/5/28   (Item 14 from file: 35)
DIALOG(R)File   35:Dissertation Abs Online
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01123496   ORDER NO: NOT AVAILABLE FROM UNIVERSITY MICROFILMS INT'L.
**SPECIFICATION AND DESIGN METHODOLOGIES FOR SEMIHARD REAL-TIME CONTROL
SYSTEMS**
    Author: MUNTZ, ALICE H.
    Degree: PH.D.
    Year: 1990
    Corporate Source/Institution: UNIVERSITY OF SOUTHERN CALIFORNIA (0208)
    Chairman: ELLIS HOROWITZ
    Source: VOLUME 51/05-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
              PAGE 2461.
    Descriptors: COMPUTER SCIENCE
    Descriptor Codes: 0984

In my thesis, I investigate a class of real-time control systems in
which a variety of types of **time** constraints are imposed on computational
activities . A subset of critical **activities** must always meet the **time**
constraints; other non-critical **activities** can violate **time** constraints
within allowable bounds; still others do not have time constraints. These
systems are called semi-hard as only a portion of the **activities** must
meet stringent **time** constraints.

The classical way of designing real-time systems makes several key
assumptions that in practice are false. Three of these assumptions are that
(i) the workload is not data dependent, (ii) timing can be a priori
determined, and (iii) there is no feedback loop between observations and
computation. In practice, the system objectives can be dynamically altered
either by the external inputs (from the system operators or other related
subsystems) or by changes detected by processing previously collected data,
timings vary depending upon the system state; and the control of data
collection and data processing forms a feedback loop.

In my thesis, I develop a **software** **requirements** specification
method for semi-hard real-time control software. I also present a design
methodology that, given **software** **requirements** generated using this
specification method, it allows one to derive a software design directly.

The key aspects of my thesis research include: (1) methods and
notations for specification of **software** **requirements** , which capture the
functional, behavioral and temporal properties of software; (2) methods and
notations for describing the dynamic behavior of a software design; (3) a
workload model which characterizes the resource **demands** of a **system** ;
(4) an activity taxonomy which characterizes major activity classes in

engineering semi-hard real-●e control system; and (5) a st●egy and
algorithms for deriving an initial task graph (i.e., the control flow model
of software architecture) from a given activity graph (i.e., the control
flow model of requirements). (Copies available exclusively from
Micrographics Department, Doheny Library, USC, Los Angeles, CA 90089-0182.)

20/5/31   (Item 1 from file: 2)
DIALOG(R)File   2:INSPEC
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6035043   INSPEC Abstract Number: C9811-5470-022
   **Title: Design of a fault tolerant real-time storage system for multimedia
applications**
   Author(s): Muntz, R.; Renato Santos, J.; Fabbrocino, F.
   Author Affiliation: Dept. of Comput. Sci., California Univ., Los Angeles,
CA, USA
   Conference Title: Proceedings. IEEE International Computer Performance
and Dependability Symposium. IPDS'98 (Cat. No.98TB100248)   p.174-83
   Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA
   Publication Date: 1998 Country of Publication: USA   xii+278 pp.
   ISBN: 0 8186 8679 0   Material Identity Number: XX98-02539
   U.S. Copyright Clearance Center Code: 0 8186 8679 0/98/$10.00
   Conference Title: Proceedings IEEE International Computer Performance and
Dependability Symposium. IPDS'98
   Conference Sponsor: IEEE Comput. Soc. Tech. Committee on Fault-Tolerant
Comput.; IFIP Working Group 7.3 on Performance Evaluation; IFIP Working
Group 10.4 on Dependable Comput. & Fault Tolerance; IFIP Working Group 6.3
on Performance of Commun. Syst.; Center for Adv. Comput. & Commun. Duke
Univ.; Clemson Univ.; Univ. Vienna - Austria; ACM SIGMETRICS
   Conference Date: 7-9 Sept. 1998   Conference Location: Durham, NC, USA
   Language: English   Document Type: Conference Paper (PA)
   Treatment: Applications (A); Practical (P)
   Abstract: We   describe the design and implementation of the RIO
(Randomized I/O) multimedia object server which manages a set of parallel
disks and supports real-time throughput and statistical delay guarantees.
The original implementation, on an SMP (Sun Microsystems E4000), has been
ported to a cluster of PCs. The new version uses a similar philosophy with
respect to allocation of data storage and scheduling of requests. However
the parallel "shared nothing" architecture raises all the issues of
latency, scalability, etc., that are familiar in parallel and distributed
 systems . Our **requirements** are particularly demanding since we expect to
support a **variety** of multimedia **applications** with varying **workload**
 requirements and data reference patterns. 3D interactive applications,
video, hypermedia and interactive scientific visualization of terabyte size
data sets are among the applications we support. This paper details the
design issues we addressed and the results of detailed simulation studies
which dictated the design choices made. (10 Refs)
   Subfile: C
   Descriptors: data visualisation; fault tolerant computing; hypermedia;
multimedia systems; real-time systems; storage management
   Identifiers: fault tolerant real-time storage system; multimedia
applications; multimedia object server; parallel disks; real-time
throughput; statistical delay guarantees; Sun Microsystems E4000; data
storage; scheduling; latency; scalability; 3D interactive applications;
hypermedia; interactive scientific visualization; simulation studies
   Class Codes: C5470 (Performance evaluation and testing); C6130B (
Graphics techniques); C6130M (Multimedia); C7250 (Information storage and
retrieval); C6120 (File organisation)
   Copyright 1998, IEE

20/5/32   (Item 2 from file: 2)
DIALOG(R)File   2:INSPEC
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5779913   INSPEC Abstract Number: C9801-6160B-015
   Title: ScaleTool: a GUI-based database scalability evaluation tool

Author(s): Helal, A.; For█r, J.
Author Affiliation: Dept. of Comput. Sci., Purdue Univ., West Lafayette, IN, USA
Conference Title: Proceedings of the IASTED/ISMM International Conference Modelling and Simulation   p.184-7
Editor(s): Hamza, M.H.
Publisher: IASTED-ACTA Press, Anaheim, CA, USA
Publication Date: 1996 Country of Publication: USA   iii+466 pp.
ISBN: 0 88986 201 X   Material Identity Number: XX96-00825
Conference Title: Proceedings of IASTED International Conference on Modelling and Simulation
Conference Sponsor: IASTED
Conference Date: 25-27 April 1996   Conference Location: Pittsburgh, PA, USA
Language: English   Document Type: Conference Paper (PA)
Treatment: Practical (P); Theoretical (T)

Abstract: We present a GUI-based tool called ScaleTool that is designed for studying the scalability of database systems. Database systems are growing in three directions: (1) the geographical (nodal) span, where the number of data sites comprising the system increases (a horizontal growth), (2) the population of users and their transactions, where the **workload** of concurrent **database** operations **demands** higher degree of multiprogramming (a vertical growth), and (3) the volume of data store, where the size of the data and the rate by which it accumulates **require** higher capacity storage **devices** and higher I/O and network transfer rates. ScaleTool can be used to study issues of scale in the vertical direction of growth. These are issues of concurrency control under very high contention. The tool is typically used in a backward engineering process to determine the requirements and the feasibility of achieving certain **TPS** in a multiprogrammed environment. We give the details of ScaleTool, and demonstrate its capabilities in finding a performance scalability matrix for certain **TPS** requirements. (7 Refs)
Subfile: C
Descriptors: concurrency control; database management systems; graphical user interfaces; multiprogramming; software tools
Identifiers: ScaleTool; GUI-based database scalability evaluation tool; database systems; multiprogramming; vertical growth; concurrency control; backward engineering; multiprogrammed environment; **TPS** requirements
Class Codes: C6160B (Distributed databases); C6180G (Graphical user interfaces); C6150J (Operating systems); C6150N (Distributed systems software); C6115 (Programming support)

20/5/34   (Item 4 from file: 2)
DIALOG(R)File   2:INSPEC

5677898   INSPEC Abstract Number: B9710-6430H-002, C9710-5320C-001
Title: Hierarchical storage servers for video on demand : feasibility, design and sizing
Author(s): Merchant, A.; Qiang Ren; Sengupta, B.
Author Affiliation: Hewlett-Packard Labs., Palo Alto, CA, USA
Conference Title: IEEE GLOBECOM 1996. Communications: The Key to Global Prosperity. Conference Record (Cat. No.96CH35942)   Part vol.1   p.272-8 vol.1
Publisher: IEEE, New York, NY, USA
Publication Date: 1996 Country of Publication: USA   3 vol. (xvi+xxxiii+xvii+2169) pp.
ISBN: 0 7803 3336 5   Material Identity Number: XX96-02662
U.S. Copyright Clearance Center Code: 0 7803 3336 5/96/$5.00
Conference Title: Proceedings of GLOBECOM'96. 1996 IEEE Global Telecommunications Conference
Conference Sponsor: IEEE Commun. Soc.; IEE; UKRI Commun. Chapter; BT; FUJITSU; ALCATEL Telecom; Braodband Technol.; NORTEL Northern Telecom; Lucent Technol.; ERICSSON
Conference Date: 18-22 Nov. 1996   Conference Location: London, UK
Language: English   Document Type: Conference Paper (PA)

Treatment: Applications (●) Practical (P); Theoretical (T●)

Abstract: We study the problem of designing a hierarchical storage server to support a given **rate** of video **requests** within specified quality of service requirements. We ask what combinations of disk storage, disk bandwidth and tertiary storage and bandwidth are required to support given request rates for videos, and how these resources should be configured to minimize cost. We show a basic design, and a series of refinements that provide the required performance at a lower cost. (9 Refs)
Subfile: B C
Descriptors: interactive video; magnetic disc storage; network servers; optical disc storage
Identifiers: hierarchical storage servers; video on demand; server design ; **server sizing** ; video requests; quality of service; magnetic disk storage; disk bandwidth; tertiary storage; cost minimization; performance; optical disks
Class Codes: B6430H (Video recording); B3120B (Magnetic recording); B4120 (Optical storage and retrieval); C5320C (Storage on moving magnetic media); C5630 (Networking equipment); C5320K (Optical storage)

20/5/38   (Item 8 from file: 2)

4641468   INSPEC Abstract Number: C9405-5420-001
 Title: System configuration of a database processor RINDA
Author(s): Nose, J.; Hayami, H.
Journal: Transactions of the Information Processing Society of Japan vol.34, no.12   p.2521-33
Publication Date: Dec. 1993 Country of Publication: Japan
CODEN: JSGRD5 ISSN: 0387-5806
Language: Japanese   Document Type: Journal Paper (JP)
Treatment: Practical (P)
Abstract: This paper investigates parameters for configuring RINDA, a database processor system. RINDA is an attached **processor used** as dedicated hardware for high-performance processing of non-indexed queries, for cases where indexing is not feasible in a relational database. This processor connects to a general purpose computer via an I/O interface. A building block approach is adopted for flexible adaptation to a variety of workloads. Ordinary indexed queries and updates are handled by the database management system (DBMS) alone, running on the general purpose computer, whereas RINDA processes nonindexed queries under DBMS control. This paper clarifies the areas of RINDA applicability and the optimal **system** configuration, by determining the **required** number of processors, connection method, buffer capacity and other resource conditions for realizing the **required** performance under various **workloads** , when processing includes both indexed and non-indexed queries. (14 Refs)
Subfile: C
Descriptors: database management systems; indexing; query processing; satellite computers; special purpose computers
Identifiers: system configuration; database processor; RINDA; attached processor; dedicated hardware; relational database; I/O interface; indexed queries; database management system; connection method; buffer capacity; resource conditions
Class Codes: C5420 (Mainframes and minicomputers); C6160 (Database management systems (DBMS))

20/5/62   (Item 2 from file: 95)

00778802 I94043442259
Titel japanisch
(Systemkonfiguration des Datenbankprozessors RINDA)
(System configuration of a database processor RINDA)
Nose, J; Hayami, H

ABSTRACT:
This paper investigates parameters for configuring RINDA, a database
processor system. RINDA is an attached **processor** **used** as dedicated
hardware for high-performance processing of non-indexed queries, for cases
where indexing is not feasible in a relational database. This processor
connects to a general purpose computer via an I/O interface. A building
block approach is adopted for flexible adaptation to a variety of
workloads. Ordinary indexed queries and updates are handled by the database
management system (DBMS) alone, running on the general purpose computer,
whereas RINDA processes nonindexed queries under DBMS control. This paper
clarifies the areas of RINDA applicability and the optimal **system**
configuration, by determining the **required** number of processors,
connection method, buffer capacity and other resource conditions for
realizing the **required** performance under various **workloads** , when
processing includes both indexed and non-indexed queries.

DESCRIPTORS: DATABASE MANAGEMENT SYSTEM; DOCUMENT INDEXING; SATELLITE
COMPUTERS; COMPUTER ARCHITECTURE; RELATIONAL DATABASES; **MICROPROCESSORS** ;
BUFFER STORAGE; **USER** INTERFACES; QUERY PROCESSING
IDENTIFIERS: SPECIAL PURPOSE COMPUTERS; SYSTEM CONFIGURATION; DATABASE
PROCESSOR; RINDA; ATTACHED PROCESSOR; DEDICATED HARDWARE; RELATIONAL
DATABASE; INDEXED QUERIES; CONNECTION METHOD; BUFFER CAPACITY; RESOURCE
CONDITIONS; Datenbankverwaltungssystem; Systemkonfiguration

Set	Items	Description
S1	136	(SIZING OR SIZE OR SIZES)(5N)(SERVER? ? OR WEBSERVER? ? OR DATABASE? ? OR DBMS OR RDBMS)
S2	1475	(REQUIR? OR NEEDS OR NECESS? OR DEMAND? ? OR CONFIGUR?)(3N-)(SERVER? OR WEBSERVER? OR APPLICATION? OR PROGRAM? ? OR SOFT-WARE OR DATABASE? OR DBMS OR RDBMS)(3N)(HARDWARE OR CLIENT? ? OR PC? ? OR COMPUTER? ? OR WORKSTATION? ?)
S3	280	(REQUIR? OR NEEDS OR NECESS? OR DEMAND? ? OR CONFIGUR?)(3N-)(SERVER? OR WEBSERVER? OR APPLICATION? OR PROGRAM? ? OR SOFT-WARE OR DATABASE? OR DBMS OR RDBMS)(3N)(TERMINAL? ? OR DEVICE? ? OR EQUIPMENT OR MACHINE? ? OR OPERATING)
S4	805	(WORKLOAD? ? OR WORK()LOAD? ? OR PROCESSING OR PERFORMANCE OR CAPACITY)(5N)(REQUIR??? OR REQUIREMENT? ? OR NEEDS OR NECE-SSARY OR NECESSIT???? OR DEMAND? ?)
S5	4493	(TYPE? ? OR KIND? ? OR SORT? ? OR FAMILY OR CATEGORY OR CL-ASS OR BRAND? ? OR VARIET??? OR GROUP? ?)(5N)(SERVER? ? OR WE-BSERVER? ? OR APPLICATION? ? OR PROGRAM? ? OR SOFTWARE? ? OR -DATABASE? ? OR DBMS OR RDBMS)
S6	842	(PROCESSOR? OR MICROPROCESSOR? OR PROCESSING()UNIT OR CPU -OR MPU)(5N)(UTILIZ? OR UTILIS? OR USE? ? OR ACTIVE OR BUSY OR WORKING OR OPERAT??? OR OPERATION? ? OR FUNCTION? ? OR FUNCTI-ONING OR RUN???? OR ACTIVE OR ACTIVIT???)
S7	17	(PROCESSOR? OR MICROPROCESSOR? OR PROCESSING()UNIT OR CPU -OR MPU)(5N)(IDLE? ? OR IDLING OR INACTIV? OR INOPERA? OR REST? OR WAIT? OR LATENC??? OR LATENT)
S8	1577	(TRANSACTION? ? OR ACTIVIT??? OR PROCESSES OR ACTION? ? OR EVENT? ? OR JOB? ? OR TASK? ? OR REQUEST? ? OR QUERY OR QUERI-ES)(5N)(RATE OR SPEED OR TIME OR SECOND? ? OR MINUTE? ?) OR T-PS
S9	246	CAPACITY()PLANNING
S10	310	(S1:S4 OR S9) AND S5:S8
S11	0	(S1:S4 OR S9) AND S5 AND S6:S7 AND S8
S12	27	S1 AND S5:S8
S13	6	SIZING(5N)(SERVER? ? OR WEBSERVER? ? OR DATABASE? ? OR DBMS OR RDBMS)
S14	2	S13 AND S5:S8
S15	184	S2:S3 AND S5:S8
S16	11	S15 AND S4
S17	0	S5 AND S6:S7 AND S8
S18	13	S14 OR S16
S19	24	(WORKLOAD? ? OR WORK()LOAD? ?)(5N)(REQUIR??? OR REQUIREMEN-T? ? OR NEEDS OR NECESSARY OR NECESSIT???? OR DEMAND? ?)
S20	6	S19 AND S5:S8
S21	18	S18 OR S20

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01537071   DOCUMENT TYPE: Product

PRODUCT NAME: DataPropagator Relational (537071)

IBM Corp (351245)
1133 Westchester Ave
White Plains, NY 10604 United States
TELEPHONE: (914) 499-1900

RECORD TYPE: Directory

CONTACT: Sales Department

DataPropagator Relational automates the copying of data between **databases**
in IBM's DB2 **family** , eliminating one of the hurdles to right- **sizing**
applications or building a client/ **server** environment. It can replace
entire contents of a copy from the source (refreshing) or transfer only
changes from source to target (updating), offering the flexibility to meet
the exact needs of the users' applications. The product accommodates a
broad range of user requirements for data replications, enhances data for
improved analysis and maintains historical change information. Features
include: (1) a graphical interface that makes it easy to define copy
operations through DataHub; and (2) supports DB2, DB2 for OS/2, DB2 for AIX
and DB2 for OS/400 databases.

DESCRIPTORS: Database Utilities; Network Software; Client/server; LANs;
    Distributed Processing

HARDWARE: IBM PC & Compatibles
OPERATING SYSTEM: OS/2; DB2; AIX; OS/400
PROGRAM LANGUAGES: Not Available
TYPE OF PRODUCT: Mini; Micro
POTENTIAL USERS: Cross Industry
PRICE: $200

OTHER REQUIREMENTS: 12MB RAM; DB2; 80386+ CPU required
REVISION DATE: 950728

DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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01077755   DOCUMENT TYPE: Product

PRODUCT NAME: IQS Smart Forms (077755)

IQS Inc (538353)
19706 Center Ridge Rd
Cleveland, OH 44116-3637 United States
TELEPHONE: (440) 333-1344

RECORD TYPE: Directory

CONTACT: Sales Department

IQS Smart Forms (TM) from IQS is a Web-based solutions for automating the
complex and rapidly evolving advanced product quality planning (APQP) and
production part approval process (PPAP) functions. The automation of these
processes , coupled with real- **time** collaboration, will transform existing
 processes for both suppliers and original equipment manufacturers (OEMs)
through shortened time to market, increased focus on core competencies,
global synchronization, and elimination of nonvalue-added tasks and risk
reduction. Today's quality systems are often delivered through legacy

systems using **client** /ser●or mainframes, and often **requ●** cumbersome
and costly **processing** . Using Web technologies, suppliers can now
implement quality process improvements using e-sourcing. Using ISQ Smart
Forms, companies can process AIAG forms, FMEAs, control plans, and other
quality documentation. They can set up APQP steps and checklists, as well
as PPAP requirements, using their own standards or ones set by AIAG. The
system offers one Web-hosted place where companies can check all document
management elements, such as due dates, issue dates, status, and assigned
person.

DESCRIPTORS: ASP (Application Service Providers); Auto Manufacturing;
     Business Forms; Quality Assurance

HARDWARE: Hardware Independent
OPERATING SYSTEM: Operating System Independent
PROGRAM LANGUAGES: Not Available
TYPE OF PRODUCT: Mainframe; Mini; Micro; Workstation
POTENTIAL USERS: Cross Industry
PRICE: $100 per user per month

REVISION DATE: 020327

21/5/3
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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01046981   DOCUMENT TYPE: Product

PRODUCT NAME: LSF Suite Standard Edition (046981)

Platform Computing Inc (617563)
25 Metro Dr #100
San Jose, CA 95110 United States
TELEPHONE: (408) 392-4923

RECORD TYPE: Directory

CONTACT: Sales Department

LSF Suite Standard Edition from Platform Computing is a workload management
tool for high-performance computing businesses. It leverages the power
within UNIX, Linux, and Windows-based systems to enable businesses to
maximize their productivity and efficiency. LSF Suite Standard Edition
continually tracks computer resources to determine the optimal system to
perform each job. It enables people to conduct more simulations and tests
by monitoring all jobs, ensuring that no work is lost. It delegates tasks
to systems according to the amount of resources they **require** , serving to
optimize **workload** efficiency. LSF Suite Standard Edition scales to
limitless systems and jobs. It can be configured to create queues based on
any criteria and to implement parameters for starting and stopping jobs,
limiting the number of **jobs** , and controlling the amount of **time** devoted
to **jobs** . It distributes resources fairly among users and can be easily
administered and updated at any time, without interrupting service.
Additionally, LSF Suite Standard Edition reschedules or reappoints jobs to
other systems if a job.fails and can automatically restart jobs in the
event of a system failure. LSF Suite Standard Edition's optional components
include LSF Parallel for managing parallel jobs and Platform MultiCluster
for building metacomputing clusters.

DESCRIPTORS: Performance Monitors; Distributed Processing; Computer
     Resource Management; System Performance; Supercomputing; System
     Monitoring; Network Management; Network Administration Tools; Network
     Servers; Load Balancing; Data Center Operations; Network Software

HARDWARE: UNIX; IBM PC & Compatibles; Sun; Silicon Graphics; DEC; HP; Cray
     ; NEC; Fujitsu
OPERATING SYSTEM: Windows NT/2000; Solaris; IRIX; Linux; UNIX; AIX; HP-UX;

```
       Solaris
PROGRAM LANGUAGES:  C; Perl
TYPE OF PRODUCT:  Mainframe; Mini; Micro; Workstation
POTENTIAL USERS:  Cross Industry, High-Performance Computing
PRICE:  Available upon request; Internet demo available

DOCUMENTATION AVAILABLE:  User manuals; reference manuals
TRAINING AVAILABLE:  Training; on-site training; technical support; support
     contracts available
REVISION DATE:  000000
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21/5/4
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00135700   DOCUMENT TYPE: Review

PRODUCT NAMES: Enterprise Application Integration (EAI)   (841331)

TITLE: Integration Across the Enterprise
AUTHOR: Tong, Ping Lu, Louis
SOURCE: eAI Journal,   v3 n11 p35(3) Nov 2001
HOMEPAGE: http://www.eaijournal.com

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

Increasingly, vertical service providers (VSPs) are providing customers
with targeted enterprise application integration (EAI) technology and
services. The deployment of real- **time   transaction** and just-in- **time**
(JIT) systems is driving EAI **demands** . A traditional **client / server**
model is being replaced by a loosely coupled message- oriented middleware
(MOM) model. In implementing MOM systems, VSPs and their customers must
define their protocol, platform, and programming interface **requirements** .
They also must address reliability, **performance** , load balancing, and
management issues. Additionally, any VSP technology that is linked with a
high-end transaction system must provide excellent scalability features. As
well, multiple VSP application servers should be able to support the same
message feeds and database servers. Tapping middleware clustering and
parallel database servers, VSPs can offer excellent fault tolerance
capabilities. VSPs should employ XML standards and should provide customers
with transaction management-system monitoring.

COMPANY NAME: Vendor Independent   (999999)
SPECIAL FEATURE: Charts
DESCRIPTORS: Enterprise Application Integration; Fault Tolerance;
     Integration Software; Middleware; ASP (Application Service Providers)
REVISION DATE: 20020430

21/5/5
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00122984   DOCUMENT TYPE: Review

PRODUCT NAMES: ZENworks for Servers   (789976)

TITLE: Novell boosts virtual management: ZENworks for Servers...
AUTHOR: Connolly, P J
SOURCE: InfoWorld,   v22 n13 p44(1) Mar 27, 2000
ISSN: 0199-6649
HOMEPAGE: http://www.infoworld.com

RECORD TYPE: Review
REVIEW TYPE: Review

Novell's ZENworks for Servers 1.0, a set of server management tools, gets
good marks overall, especially for a tiered software distribution model
that can be used over slow WAN links, support for scheduled distribution of
key server software packages, and a reduced need for visits to remote sites
that do not have local administrators. However, execution of the ConsoleOne
management interface is sluggish and support is provided only for NetWare
servers. With ZENworks for Servers 1.0, users can implement uniform server
management practices and better deploy support staff by reducing travel
time. ZENworks for Servers 1.0 has better tools for management of **software**
 distribution, **operating** system **configuration** , and start-up/shut-down
processes. Administrators can thereby reduce the number of tedious and
time -consuming **tasks   required** to maintain server uniformity and
performance . Implementation of ZENworks for Servers 1.0 can be costly;
deployment is advised only for environments with more than a dozen servers.
ManageWise users under contract can get a free upgrade to ZENworks for
Servers 1.0. One of the neatest features of ZENworks for Servers 1.0 is the
ability to modify procedures for shut down, restart, and server rebooting.
Testers found that execution of the <down> command would actually confirm
that software modules on test servers were not active before the shutdown
process was run.

COMPANY NAME: Novell Inc   (344893)
SPECIAL FEATURE: Charts
DESCRIPTORS: Network Servers; Network Administration Tools; Network
     Software; System Monitoring; Network Management; NetWare; WANs
REVISION DATE: 20000930

21/5/6
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00118279   DOCUMENT TYPE: Review

PRODUCT NAMES: SilkPerformer 3.0   (742929)

TITLE: SilkPerformer tests Web-site fabrics
AUTHOR: Rapoza, Jim
SOURCE: PC Week,   v16 n30   p34(1) Jul 26, 1999
ISSN: 0740-1604

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: B

Segue Software's Silk Performer 3.0, a powerful testing package with
broad-based features, supports testing of database connections and
diversified Web applications. Rated good overall with excellent capability,
Silk Performer 3.0 allows companies to stress-an-test Web and database
applications to home in on problems before they cause costly and worrisome
Web site failures. The software is versatile and provides comprehensive
testing tools, but its test scripting tools are very difficult to use.
Users can test many **types** of **applications** , and reporting tools are
robust and useful. However, only Oracle and Microsoft SQL Server databases
can be load tested. During testing of Silk Performer 3.0, Workload Wizard
crashed on systems connected to NetWare clients. Companies with elaborate
and nonstatic sites, including those with extranets and support for
business-to-business communications, will find Version 3.0 a good choice
for making critical assessments, including those related to the need for
equipment upgrades or additions. However, companies simply testing Web site
and We-enabled applications can get by with simpler tools, such as RadView
Software's WebLoad. Silk Performer 3.0 provides a new wizard that guides
users through steps **required** to create a **workload** process, but the
feature crashed with NetWare client service installed. Silk Performer 3.0
also has more powerful tools for running virtual clients as specific
browser types than are provided in other testing tools.

COMPANY NAME: Segue Software Inc (561525)
SPECIAL FEATURE: Screen Layouts Charts
DESCRIPTORS: Software Testing; Program Development; Internet Utilities;
    IBM PC & Compatibles; SQL; Oracle
REVISION DATE: 20010330

21/5/7
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00116675   DOCUMENT TYPE: Review

**PRODUCT NAMES: Novell Directory Services (NDS) for NT (721271); Microsoft
Active Directory (654001)**

TITLE: Directory Services
AUTHOR: McFadden, Mark
SOURCE: ent,   v4 n6 p22(2) Mar 24, 1999
ISSN: 1085-2395
HOMEPAGE: http://www.entmag.com

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

Novell's Novell Directory Services (NDS) for NT and Microsoft's Microsoft
Active Directory, two network directory services, are highlighted in a
discussion of the ways in which directory services are currently used and
the challenges involved in administering them. Currently, network operating
systems (NOSs) still operate under a centralized model, in which each user
has a password, home file directory, and a **group** of permissions. Dividing
 application workload among various platforms is efficient, but
administration of **clients** and servers can **require** significant
resources. The **workload** results from the number of servers and from
systems and applications that have their own access control methods and
directories. A recent survey indicates that Fortune 500 companies each have
an average of 190 directories, and supporting them is increasingly complex
due to the number of formats to be supported and the disparate systems
available to collaborating users. Directories can be used as the basis for
e-commerce as well, such as the Automotive Network Exchange, which provides
an extranet for e-commerce between suppliers and the automotive industry.
Windows NT users can choose between NDS and Active Directory, which will be
part of Windows 2000. Administration problems may be eased by the use of
metadirectories, which integrate directories by linking various different
schema and attributes into a universal, logical view.

COMPANY NAME: Novell Inc (344893); Microsoft Corp (112127)
DESCRIPTORS: Network Directories; Computer Resource Management; Network
    Software; Auto Manufacturing; Windows NT/2000; Network Administration
    Tools; LANs
REVISION DATE: 20011030

21/5/8
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00113560   DOCUMENT TYPE: Review

PRODUCT NAMES: Microsoft SQL Server 7.0 (590096)

TITLE: SQL Server 7.0 is bulking up to fight
AUTHOR: Gruske, Carolyn
SOURCE: Computerworld Canada,   v14 n23 p34(2) Nov 20, 1998
ISSN: 1484-9089
HOMEPAGE: http://www.lti.on.ca

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

Microsoft SQL Server 7.0 is trying to move up to the **class** of enterprise **database** , and it has added some features that were previously missing from the offering. SQL Server 7.0 now has row-level locking, and the latest version stresses scalability, performance, and reliability. Microsoft's strategy is to market to both ends of the customer range by supporting large, complex databases, as well as smaller-scale implementations. For the enterprise, Microsoft has added a Data Transformation Tool to import data from any ODBC-compliant data source and deposit it into any other ODBC-compliant database. The Data Transformation Tool can be used as a transport and transformation mechanism, and replaces the older Bulk Copy tool. Other changes designed to target enterprise users are increases in capacity. Page size has gone from 2KB to 8KB, and the number of columns per row has increased from 250 to 1,024, and row size from 1,962 to 8,060 bytes per row. Several database management functions have also been automated, such as memory tuning and **database   sizing** . SQL **Server** 7.0 has also adopted the Microsoft Back Office Management Console as its primary control interface, and the Explorer format for its viewer.

COMPANY NAME: Microsoft Canada   (464627)
SPECIAL FEATURE: Screen Layouts
DESCRIPTORS: Program Development; Database Management; Database Servers;
    Network Software; SQL Server
REVISION DATE: 20000830

 21/5/9
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00110342   DOCUMENT TYPE: Review

 PRODUCT NAMES: Microsoft Windows NT   (347973); DSS Agent   (516945); DSS Web   (619981); DSS Broadcaster   (693669)

 TITLE: Keeping Hospitals Healthy
AUTHOR: Staff
SOURCE: Software Magazine,   v18 n11 p67(2) Aug 1998
ISSN: 0897-8085
HOMEPAGE: http://www.softwaremagazine.com

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

Microsoft's Microsoft Windows NT and Microstrategy's DSS Agent, DSS Web, and DSS Broadcaster are components included in Premier's comparative data warehouse, which was created to reduce the **workload** formerly **required** to query the company's database of competitive positioning information and for generating custom reports. Premier, a health care alliance, helped Microsoft win The Data Warehousing Institute's 1998 Award for Best Practices in Data Warehousing in the **Applications** of Data Warehousing/Data Marts **category** . The installation can now generate extensively particularized and customized reports in just seconds, and Premier forecasts savings of up to $450,000 each year in full-time employment expenses and other costs, so that staff can concentrate on development of other products. Premier aims to eliminate data storage in incompatible databases and to give customers much more detailed access to market data. Customers wanted more than summary-level detail, and wanted to allow individual users to quickly analyze detailed data autonomously. The system was designed from the decision support system outward because querying tools cannot be considered expendable, when hundreds of users must be supported. Microstrategy was able to optimize SQL for all major relational databases, and Premier is considering use of DSS Broadcaster,

which permits generation of ●rsonalized reports, which are ● n pushed via
e-mail, fax, pager, or mobile phone.

COMPANY NAME: Microsoft Corp (112127); MicroStrategy Inc (522643)
DESCRIPTORS: Windows NT/2000; Decision Support Systems; Information
     Retrieval; Report Generators; Health Care Management; Data Warehouses
REVISION DATE: 20000830

 21/5/10
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00103611   DOCUMENT TYPE: Review

PRODUCT NAMES: emWare Embedded Micro Interface Technology (EMIT)   (673498)

TITLE: Managing Devices with the Web
AUTHOR: Howard, Michael Sontag, Chris
SOURCE: Byte,   v22 n9 p45(2) Sep 1997
ISSN: 0360-5280
HOMEPAGE: http://www.byte.com

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: A

emWare's emWare Embedded Micro Interface Technology (EMIT) provides an
interface that allows users to control and monitor devices with a World
Wide Web browser. EMIT pushes as many tasks as possible to a Windows or
UNIX machine, even though the architecture used is a skinny server/fat
client architecture whose Web browser has limited functions. The device can
gain access to tasks **requiring** lots of **processing** power on the client
using a lightweight distributed computing architecture deployed by emWare.
EMIT's **device** -resident Web **server   needs** only 30 bytes of RAM and 750
bytes of ROM to run, so that it can run on many low-priced embedded
microcontrollers, as well as the largest **microprocessors** . EMIT can also
use on-board EPROM to manage other device data, including logging
information, or to store JavaScript class files and Hypertext Markup
Language (HTML) documents. As for the client, the host system employs a
library of preprogrammed functions that reduce resource usage by assembling
the GUI in the browser and assisting with management of communications with
device-specific functions. EMIT provides file storage and retrieval, device
subroutine invocation, security, device variable access, and device events.
Five software modules are included: emObjects, emManager, emMicro,
Microtags, and emNet.

COMPANY NAME: emWare (635791)
SPECIAL FEATURE: Charts Screen Layouts
DESCRIPTORS: Embedded Systems; Internet Utilities; System Monitoring;
     Computer Security; Distributed Processing; Network Administration Tools
     ; Network Management; Thin Clients; Internet Security
REVISION DATE: 20020130

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00102054   DOCUMENT TYPE: Review

PRODUCT NAMES: WinFrame/Enterprise 1.7 Beta   (621315)

TITLE: WinFrame helps bring Windows to thin clients
AUTHOR: Biggs, Maggie
SOURCE: InfoWorld,   v19 n35 p99(2) Sep 1, 1997
ISSN: 0199-6649
HOMEPAGE: http://www.infoworld.com

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: A

Citrix Systems' WinFrame/Enterprise 1.7 Beta, a remote access application
server, is a good solution for heavily distributed, Windows-centered
environments that wish to make server-based Windows applications available
to remote or thin clients. It has the ability to cluster WinFrame servers
to enhance scalability, and can configure applications for load balancing.
Support is provided for Web, Macintosh, and UNIX **clients** . **Server** -side
hardware   requirements are considerable, because **applications** cannot be
fully shared over end user sessions. Remote access is only available in
Windows applications, and beta bugs were found during configuration of
remote access services. Citrix's Intelligent Console Architecture (ICA)
protocol provides communication between and end-user machine and a
multi-user version of Windows NT 3.51 on the WinFrame server. Use of ICA
reduces resource use on end-user machines, a special advantage for thin
clients or users of portable computers. End-user sessions are handled
individually, except for application sharing, which means that many
sessions must run concurrently. This can require balancing of users over
multiple WinFrame servers to enhance **performance** . Configuration of a
WinFrame **server   requires** consideration of the **type** of end- **user**
connections and quantity of server **processors** and memory available.
Administration tools are powerful, and support for remote management of
multiple WinFrame servers is useful.

PRICE: $5995

COMPANY NAME: Citrix Systems Inc (502545)
SPECIAL FEATURE: Screen Layouts Charts
DESCRIPTORS: Network Software; Remote Network Access; Windows; IBM PC &
    Compatibles; Windows NT/2000; Apple Macintosh; Network Servers; LANs;
    UNIX; Thin Clients; MacOS
REVISION DATE: 20020130

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00083510   DOCUMENT TYPE: Review

**PRODUCT NAMES: GUI Sys 3.0 (587028); Janna Contact 95 (543161);
UnInstaller 3 for Networks (431303); BoundsChecker for DOS 3.0 Pro Edition
  (288756)**

TITLE: Lab Notes
AUTHOR: Coffee, Peter Rapoza, Jim
SOURCE: PC Week,   v12 n39 p79(3) Oct 2, 1995
ISSN: 0740-1604

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: A

Lab tests of four products include those for Client/Server Technology's
GUISys 3.0, a **family** of **application** development tools. The tools
demonstrate design that incorporates large quantities of development
expertise; with them, programmers can with little effort convert text-based
minicomputer and mainframe applications to client/server systems with
good-looking Visual Basic desktop clients. Janna Systems' Contact 95 is a
reliable contact management product for Windows 95 with links to
Microsoft's Exchange and Schedule+ 7.0, but resource **requirements** are
substantial and **performance** could be better. MicroHelp's UnInstaller 3
for Networks allows Windows network administrators to clean up and remove
unused files from network drives; a NetDecoy feature removes applications
from clients and servers easily. NuMega's Bounds Checker 3.0 ProEdition

helps developers find codin⬤rrors with many tools that wor⬤t all stages of development.

COMPANY NAME: Jacada Inc (611779); Siebel Systems Canada Ltd (598798);
    Network Associates Inc (613304); Compuware Corp (474959)
SPECIAL FEATURE: Screen Layouts
DESCRIPTORS: **Program** Development; Client/ **server** ; Windows; Address
    Books; IBM **PC** & Compatibles; Conversion **Software** ; Network
    Administration Tools; **Configuration** Management; Software Testing;
    Network Software; Visual Basic
REVISION DATE: 20020422

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DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00080308   DOCUMENT TYPE: Review

PRODUCT NAMES: Best/1 (543276)

TITLE: BGS' BEST/1 Pieces Together The Puzzle
AUTHOR: Esch, Jim
SOURCE: HP Professional,   v9 n7 p18(1) Jul 1995
ISSN: 0986-145X
HOMEPAGE: http://www.hppro.com

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: A

Many UNIX-based performance and capacity managers do not accommodate the
full range of capacity management needs. When a utility company wanted to
analyze **CPU** **utilization** on their RS/6000 servers, most of the products
they reviewed included a real-time monitor, but were unable to group data
into **workloads** . This **requires** the administrator to examine every single
process, which may run into the hundreds every day. With BGS Systems'
Best/1 Performance Assurance, the utility was able to avoid having to get
into that level of detail. The software includes a performance monitor,
Oracle and Sybase facilities, and supports SunOS, Solaris, AIX, and HP-UX.
Best/1 allows the shop, which is migrating several **applications** off the
mainframe, to **group** **server** **applications** into workloads. The monitor
utilizes intelligent agents to diagnose problems as they occur, and the
Best/1-Predict utility provides what-if modeling for capacity planning.

PRICE: $25000

COMPANY NAME: BMC Software Inc (467219)
SPECIAL FEATURE: Screen Layouts
DESCRIPTORS: System Performance; UNIX; Capacity Planning; System Utilities
    ; Technical Support; IBM RS/6000; Data Center Operations; Sun; SunOS;
    Solaris; HP-UX; HP
REVISION DATE: 20010930

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00078758   DOCUMENT TYPE: Review

PRODUCT NAMES: Solstice AutoClient (556173)

TITLE: Networking Goes Automatic
AUTHOR: Kapustka, Paul
SOURCE: Information Week,   v528 p92(2) May 22, 1995
ISSN: 8750-6874
HOMEPAGE: http://www.informationweek.com

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

Solstice AutoClient, network management automation software from Sun
Microsystems, helps reduce system administration and support costs. The
product uses innovative file cache and sharing methods to make intelligent
clients act more like mainframe terminals. Systems administrators would
rather manage mainframe- **type** client/ **server** 'terminals,' which are
really powerful, low-cost desktop PCs or workstations. They replace less
scalable terminals. With AutoClient, users can store files and applications
on a central server and download as needed to connected clients. Users have
access to desktop **machine** **processing** power, which runs **applications**
and **requires** less network use than does a 'dumb' **terminal** . AutoClient
machines use less network bandwidth, which allows more clients to connect.
The advantage for the system administrator is the fact that such tasks as
software distribution are handled by the server.

COMPANY NAME: Sun Microsystems Inc   (385557)
DESCRIPTORS: Network Management; Network Administration Tools; Network
    Software; Sun; System Monitoring; Client/server
REVISION DATE: 19990830

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00076814   DOCUMENT TYPE: Review

PRODUCT NAMES: Performance Monitors   (830038); Client/server   (832383)

TITLE: Scale Up with TP Monitors
AUTHOR: Gray, Jim Edwards, Jeri
SOURCE: Byte,   v20 n4   p123(5) Apr 1995
ISSN: 0360-5280
HOMEPAGE: http://www.byte.com

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

When a client/server system scales up to hundreds of clients issuing
requests from a single **server** , a transaction **processing** (TP) monitor
becomes **necessary** . A typical **client / server** **application** dedicates a
single server process per client, although this model has scalability
problems. A server process per server model may overcome this problem, but
still does not scale to shared-memory symmetric multiprocessors. This
suggests a process per application server partition, which specializes a
process to service a particular function. The system is scaled by adding
servers for each application. This model is used for scaling up several
application **types** . A router function model provides a more scalable
design. In this model, a client connects to a router, which brokers
requests out to servers. Most TP monitors use a three-ball model, where the
client does data capture and local data processing, sends requests to
routers, which then broker the requests to server processes.

COMPANY NAME: Vendor Independent   (999999)
SPECIAL FEATURE: Charts
DESCRIPTORS: Performance Monitors; Client/server; Network Software; System
    Monitoring; Network Management; System Performance; Network
    Administration Tools
REVISION DATE: 19950930

 21/5/16
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.

00071185   DOCUMENT TYPE: Review

PRODUCT NAMES: CheckIt Diagnostic Kit   (627836)

TITLE: System Snoop Tells Inside Story
AUTHOR: Albinus, Philip
SOURCE: Windows Magazine,   v5 n11 p144(1) Nov 1994
ISSN: 1060-1066
HOMEPAGE: http://www.winmag.com

RECORD TYPE: Review
REVIEW TYPE: Review
GRADE: A

WinCheckIt is a group of system utilities for Windows machines that track
system **performance** and make any **required** corrections to configuration.
The product deletes unneeded applications and duplicate or orphan files; it
also performs diagnostics, maintains the System Summary **hardware** /
software   configuration list, and does other maintenance tasks. On first
launch, WinCheckIt gathers data about the specific PC; during test this
process was completed in under two minutes. The test also determined the
correct DOS and Windows versions, listing BIOS maker and the presence of a
two-button mouse. Clean Up finds unwanted files, and Uninstalled removes
unwanted files and icons. WinCheckIt has particularly strong report
functions, with a wide **variety** of detailed reports on hardware, **software**
, and memory use.

PRICE: $50

COMPANY NAME: TouchStone Capital Group Inc   (330973)
SPECIAL FEATURE: Screen Layouts
DESCRIPTORS: Windows; System Utilities; Computer Equipment; Configuration
     Management; IBM PC & Compatibles; System Performance; Technical Support
     ; Computer Diagnostics
REVISION DATE: 20010930

21/5/17
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.

00070807   DOCUMENT TYPE: Review

PRODUCT NAMES: Best/1   (543276); Router Manager   (506923); TrendTrak
(459593); Network General Reporter   (528072); NetMaker XA XA   (413453)

TITLE: A Rapacity for Capacity Planning
AUTHOR: Bort, Julie
SOURCE: Client/Server Computing,   v1 n10 p88(5) Oct 1994
ISSN: 1059-3470

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

Network administrators for client/server systems must decide if capacity
planning tools are worth their often large prices. The products collect
data for current capacity, as well as node, server, and wire **use** ; predict
future **CPU   workload** , I/O, and memory/bandwidth **requirements** ; and
model related configurations. Such products as Best/1 Performance Assurance
for UNIX perform this way, but cannot collect local area network (LAN) or
wide area network (WAN) use data. Router Manager, however, gathers data for
routers, but cannot simulate activities. A financial services uses
TrendTrak to plan server needs and provide usage tracking data. A regional
carrier unit uses Reporter to analyze wire trends and capacity; the tool is
automatic enough to allow proactive monitoring and trending. NetMaker XA, a

bandwidth capacity planning ●ol, has an object-oriented (OC●pplication
programming interface (API) that supports customized data man●pulation.

COMPANY NAME: BMC Software Inc (467219); StonyBrook Services Inc
     (583529); INTRAK Inc (558711); Network Associates Inc (613304); Make
     Systems Inc (513253)
SPECIAL FEATURE: Charts Graphs
DESCRIPTORS: Capacity Planning; Network Software; LANs; Network Design;
     Network Administration Tools; UNIX; Client/server
REVISION DATE: 20010830

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00070101   DOCUMENT TYPE: Review

PRODUCT NAMES: Kurzweil Voice 1.0 Windows   (522309)

TITLE: Interfacing DSP Filtering to Win32s Allows PCs to Recognize Speech
AUTHOR: Staff
SOURCE: Personal Eng & Instrumentation News,   v11 n9 p58(3) Sep 1994
ISSN: 0748-0016
HOMEPAGE: http://www.pein.com

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

Kurzweil Applied Intelligence waited until Microsoft released its Win32s
extension to Windows 3.1 before releasing its Kurzweil Voice for Windows
1.0 product, since recognition of a large vocabulary of spoken words on a
PC   requires 32-bit **processing** . The **hardware** and **software**
combination lets users dictate text and commands to Windows applications.
Speech recognition is speaker independent, and has an accuracy rate of at
least 85 percent. For real time filtering of captured speech, a DSP-based
data acquisition system must supply data conversion, and process each
spoken word as the next one is pronounced. The hardware digitizes the voice
input, then filters the data into discrete units.

PRICE: $995

COMPANY NAME: ScanSoft Inc (088358)
SPECIAL FEATURE: Screen Layouts
DESCRIPTORS: Voice Recognition; Windows; IBM PC & Compatibles; **User**
     Interfaces; DSP (Digital Signal **Processors**)
REVISION DATE: 20020422